**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY**
**AIR PROGRAM**

**33 N. Stone Avenue, Suite 700 • Tucson, Arizona 85701 • Phone: (520) 243-7400**

# AIR QUALITY OPERATING PERMIT

(As required by Title 17.12, Article II, Pima County Code)

## ISSUED TO

# ROSEMONT COPPER COMPANY
# 12700 E. GREATERVILLE ROAD
# SONOITA, ARIZONA 85637

*This air quality operating permit does not relieve applicant of responsibility for meeting all air pollution regulations*

PROPOSED PERMIT

THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING: **Conditions contained in Parts A and B AND Attachments 1 and 2.**

PERMIT NUMBER **6112** PERMIT CLASS **II**

ISSUED: _____ EXPIRES: _____

***Mukonde Chama, Air Permits Supervisor, PDEQ***

SIGNATURE TITLE

# SUMMARY

This air quality operating permit is issued to Rosemont Copper Company, (Rosemont) a subsidiary of Augusta Resource Corporation, for its Rosemont Copper Project which is located approximately 30 miles southeast of Tucson on State highway 83, Arizona. The facility plans to operate an open-pit copper mine to include mining, milling, leaching, and solvent extraction/ electrowinning processes. The peak mining rate is projected to be 376,000 tons per day (tpd) of total material (ore and waste).

Emissions from the facility will consist primarily of fugitive and non fugitive particulate matter (PM) from mining, unpaved roads and tailing operations, nitrogen oxide and carbon monoxide from portable and stationary combustion sources and volatile organic compounds from organic liquid storage activities. The facility plans to control fugitive emissions using a dust control program that will control emissions by a combination of methods including, but not limited to, retention of native vegetation, application of dust and erosion chemical suppressants, road watering etc. Non-fugitive emissions will be controlled through the use of or a combination of scrubbers, cartridge filter dust collectors, electrostatic precipitator(s) and baghouse(s). Specific equipment used to control emissions is outlined in the specific conditions found in Part B of the permit. ROSEMONT has proposed a synthetic emission limitation (SEL) to limit emissions below major source levels and therefore avoid a Title V permit.

The facility plans to operate 24 hours per day, 365 days per year except during routine maintenance, shutdown or repair of equipment.

The following facility-wide emissions are for informational purposes only and are used to establish a "baseline" of emissions for the initial issuance of the permit. They are not intended to be enforceable emission limits unless otherwise noted in Part B of this permit.

The emission rates were obtained from information contained in the application submitted July 29, 2010 and updated through the permitting process. The last update to the application was received on June 1, 2011.

| Emission Source | Pollutant (tons/yr) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **PM** | **$PM_{2.5}$** | **$PM_{10}$** | **$NO_X$** | **$SO_2$** | **CO** | **VOC** | **$HAP_S$ (Total)** |
| **Facility Emissions Non-Fugitive** | 88.06 | 29.03 | 67.62 | 16.76 | 0.06 | 9.00 | 1.51 | 3.37 |
| **Facility Emissions Fugitive** | 3094 | 93.48 | 842 | 153.82 | 18.10 | 606.22 | 3.77 | 0.00 |

Based on the calculations and limitations submitted in the application, RCP is a Class II, synthetic minor source for PM, $PM_{10}$, $PM_{2.5}$ and a true minor source for all other pollutants including single and combined HAPs.

**All terms and conditions of this permit are not Federally Enforceable by the Administrator of the United States Environmental Protection Agency (U.S.EPA) under the Clean Air Act, except as otherwise noted**.

PROPOSED PERMIT

# TABLE OF CONTENTS

**Summary** 2

**Part A: General Provisions** 4

I. Permit Expiration and Renewal 4
II. Compliance with Permit Conditions 4
III. Permit Revision, Reopening, Revocation and Reissuance, or Termination for Cause 4
IV. Posting of Permit 5
V. Fee Payment 5
VI. Annual Emissions Inventory Questionnaire 5
VII. Certification of Truth, Accuracy and Completeness 5
VIII. Inspection and Entry 5
IX. Permit Revision Pursuant to Federal Hazardous Air Pollutant Standard 6
X. Excess Emissions and Emergency Reporting 6
XI. Recordkeeping Requirements 10
XII. Reporting Requirements 11
XIII. Duty to Provide Information 11
XIV. Permit Amendment or Revision 11
XV. Facility Changes Allowed Without Permit Revisions 12
XVI. Testing Requirements 14
XVII. Property Rights 15
XVIII. Severability Clause 15
XIX. Accident Prevention Requirements Under the Clean Air Act (CAA Section 112(r)) 15
XX. Asbestos Requirements (Demolition / Renovation) 15
XXI. Stratospheric Ozone Depleting Substances 16

**Part B: Specific Conditions** 17

Applicability 17
Section 1 Primary Crusher and Coarse Ore Storage 18
Section 2 Pebble Crusher 26
Section 3 Copper Concentrate Dewatering 31
Section 4 Molybdenum Concentrate Dewatering 37
Section 5 Mining Operations 43
Section 6 Solvent Extraction & Electrowinning (SX/EW) 48
Section 7 Combustion Processes 50
Section 8 Miscellaneous Sources 55
Section 9 Storage Tanks 59
Section 10 Mobile Sources 60

**Attachment 1: Applicable Regulations** 61

**Attachment 2: Equipment List** 62

**Attachment 3: Insignificant Equipment List** 70

PROPOSED PERMIT

# PART A: GENERAL PROVISIONS

(References to A.R.S. are references to the Arizona Revised Statutes, references to A.A.C. are references to the Arizona Administrative Code, and references to PCC are references to Title 17 of the Pima County Code)

## I. PERMIT EXPIRATION AND RENEWAL [PCC 17.12.165.C.2 & PCC 17.12.185.A.1]

A. This permit is valid for a period of five years from the date of issuance of the permit.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not greater than 18 months prior to the date of permit expiration.

## II. COMPLIANCE WITH PERMIT CONDITIONS [PCC 17.12.185.A.8.a & b]

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of Arizona air quality statutes A.R.S. Title 49, Chapter 3, and Pima County air quality rules. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

## III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE [PCC 17.12.185.A.7.c & PCC 17.12.270]

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Act become applicable to a major source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to PCC 17.12.280. Any permit reopening required pursuant to this paragraph shall comply with provisions in PCC 17.12.280 for permit renewal and shall reset the five-year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Control Officer determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

PROPOSED PERMIT

4. The Control Officer or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of Part A shall not result in the resetting of the five-year permit term.

## IV. POSTING OF PERMIT [PCC 17.12.080]

The Permittee shall maintain a complete copy of the complete permit shall be kept onsite. If it is not feasible to maintain a copy of the permit onsite the Permittee may request in writing, to maintain a copy of the permit at an alternate location. Upon written approval by the Control Officer, the Permittee must maintain a complete copy of the permit at the approved alternative location.

## V. FEE PAYMENT [PCC 17.12.185.A.8 & PCC 17.12.520]

The Permittee shall pay fees to the Control Officer pursuant to PCC 17.12.520.

## VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE [PCC 17.12.320]

A. When requested by the Control Officer, the Permittee shall complete and submit an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Control Officer makes the request and provides the inventory form each year, whichever occurs later, and shall include emission information for the previous calendar year.

B. The questionnaire shall be on a form provided by or approved by the Control Officer and shall include the information required by PCC 17.12.320.

## VII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS [PCC 17.12.165.H]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required by this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

## VIII. INSPECTION AND ENTRY [PCC 17.12.220.A.4]

The Permittee shall allow the Control Officer or the authorized representative of the Control Officer upon presentation of proper credentials to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

PROPOSED PERMIT

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

## IX. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD [PCC 17.12.165.C.3]

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

## X EXCESS EMISSIONS AND EMERGENCY REPORTING [PCC 17.12.040]

A. Excess Emissions Reporting [PCC 17.12.040]

1. Excess emissions shall be reported as follows:

a. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. The report shall be in 2 parts as specified below:

i. Notification by telephone or facsimile within 24 hours of the time the Permittee first learned of the occurrence of excess emission that includes all available information from 17.12.040.B. The number to call to report excess emissions is **520-243-7400.** The facsimile number to report excess emissions is **520-838-7432.**

ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification under X.A.1.a.i of Part A above.

**Send to PDEQ Air Program, 33 N. Stone Avenue, Ste 700, Tucson, Arizona 85701.**

b. The excess emission report shall contain the following information:

i. The identity of each stack or other emission point where the excess emission occurred;

ii. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

iii. The time and duration or expected duration of the excess emissions;

iv. The identity of the equipment from which the excess emissions emanated;

PROPOSED PERMIT

v. The nature and cause of the emissions;

vi. The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunctions; and

vii. The steps that were or are being taken to limit the excess emissions; If the source's permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this Section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to subsections XI.A.1.a & b of Part A.

B. Emergency Provision [PCC 17.12.185.D]

1. An "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emission attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the conditions of PCC 17.12.185.D.3 are met.

3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;

b. At the time of the emergency, the permitted facility was being properly operated;

c. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

d. The Permittee submitted notice of the emergency to the Control Officer by certified mail or hand delivery within two (2) working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an

PROPOSED PERMIT

emergency has the burden of proof.

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

C. Compliance Schedule [ARS § 49-480.F.3 & 5]

For any excess emission or permit deviation that cannot be corrected with 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

D. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown. [PCC 17.12.035]

1. Applicability

This rule establishes affirmative defenses for certain emission in excess of a n emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

a. Promulgated pursuant to Sections 111 or 112 of the Act,

b. Promulgated pursuant to Titles IV or VI of the Clean Air Act,

c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. E.P.A., or

d. Included in a permit to meet the requirements of PCC 17.16.590.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The owner or operator of a source with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner or operator of the source has complied with the reporting requirements of XIII.B of this Part and has demonstrated all of the following:

a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the operator;

b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the

PROPOSED PERMIT

owner or operator satisfactorily demonstrated that the measures were impracticable;

d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;

i. All emissions monitoring systems were kept in operation if at all practicable; and

j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

3. Affirmative Defense for Startup and Shutdown

a. Except as provided in X.D.3.b of Part A, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The owner or operator of a source with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner or operator of the source has complied with the reporting requirements of XII.B of Part A and has demonstrated all of the following:

i. The excess emissions could not have been prevented through careful and prudent planning and design;

ii. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

iii. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

PROPOSED PERMIT

v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

vi. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

vii. All emissions monitoring systems were kept in operation if at all practicable; and

viii. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to X.D.2 of Part A.

4. Affirmative Defense for Malfunctions During Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to X.D.2 of Part A.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under X.D.2 or 3 of Part A, the Permittee of the source shall demonstrate, through submission of the data and information required by this Section and XII.B, that all reasonable and practicable measures within the owner or operator's control were implemented to prevent the occurrence of the excess emissions.

## XI. RECORDKEEPING REQUIREMENTS [PCC 17.12.185.A.4]

A. The Permittee shall keep records of all required monitoring information including, where applicable, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;

2. The date(s) analyses were performed;

3. The name of the company or entity that performed the analyses;

4. A description of the analytical techniques or methods used;

5. The results of such analyses; and

6. The operating conditions as existing at the time of sampling or measurement.

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

PROPOSED PERMIT

C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

## XII. REPORTING REQUIREMENTS [PCC 17.12.185.A.5]

The Permittee shall comply with all of the reporting requirements of this permit. These include all of the following:

A. Excess emissions and emergency reports in accordance with X of Part A.

B. Performance test results in accordance with XVI.F of Part A.

C. Reporting requirements listed in Part B of this permit.

## XIII. DUTY TO PROVIDE INFORMATION [PCC 17.12.185.A.7.e & PCC 17.12.165.G]

A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

## XIV. PERMIT AMENDMENT OR REVISION [PCC 17.12.245, PCC 17.12.255 & PCC 17.12.260]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVI, as follows:

A. Administrative Permit Amendment (PCC 17.12.245.);

B. Minor Permit Revision (PCC 17.12.255.);

C. Significant Permit Revision (PCC 17.12.260.).

The applicability and requirements for such action are defined in the above referenced regulations.

## XV. FACILITY CHANGES WITHOUT A PERMIT REVISION [PCC 17.12.240]

A Except for a physical change or change in the method of operation at a Class II source requiring a permit revision under PCC 17.12.235, or a change subject to logging or notice requirements in subsection XV.B or C of Part A, a change at a Class II source shall not be subject to revision, notice, or logging requirements under this Chapter.

PROPOSED PERMIT

B. Except as otherwise provided in the conditions applicable to an emissions cap created under PCC 17.12.195, the following changes may be made if the source keeps onsite records of the changes according to XV.I of Part A:

1. Implementing an alternative operating scenario, including raw material changes;

2. Changing process equipment, operating procedures, or making any other physical change if the permit requires the change to be logged;

3. Engaging in any new insignificant activity listed in PCC 17.04.340, Insignificant Activities definition; (a) through (i) but not listed in the permit;

4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Control Officer may require verification of efficiency of the new equipment by performance tests; and

5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.

C. Except as provided in the conditions applicable to an emissions cap created under PCC 17.12.195, the following changes may be made if the source provides written notice to the Department in advance of the change as provided below:

1. Replacing an item of air pollution control equipment listed in the permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: seven days. The Control Officer may require verification of efficiency of the new equipment by performance tests;

2. A physical change or change in the method of operation that increases actual emissions more than 10% of the major source threshold for any conventional pollutant but does not require a permit revision: seven days;

3. Replacing an item of air pollution control equipment listed in the permit with one that is not substantially similar but that has the same or better efficiency: 30 days. The Control Officer may require verification of efficiency of the new equipment by performance tests;

4. A change that would trigger an applicable requirement that already exists in the permit: 30 days unless otherwise required by the applicable requirement;

5. A change that amounts to reconstruction of the source or an affected facility: seven days. For purposes of this subsection, reconstruction of a source or an affected facility shall be presumed if the fixed capital cost of the new components exceeds 50% of the fixed capital cost of a comparable entirely new source or affected facility and the changes to the components have occurred over the 12 consecutive months beginning with commencement of construction; and

6. A change that will result in the emissions of a new regulated air pollutant above an applicable regulatory threshold but that does not trigger a new applicable requirement for that source category: 30 days. For purposes of this requirement, an applicable regulatory

PROPOSED PERMIT

threshold for a conventional air pollutant shall be 10% of the applicable major source threshold for that pollutant.

D. For each change under XV.C of Part A, the written notice shall be by certified mail or hand delivery and shall be received by the Control Officer the minimum amount of time in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided with less than required notice, but must be provided as far in advance of the change, or if advance notification is not practicable, as soon after the change as possible. The written notice shall include:

1. When the proposed change will occur,

2. A description of the change,

3. Any change in emissions of regulated air pollutants, and

4. Any permit term or condition that is no longer applicable as a result of the change.

E A source may implement any change in XV.C of Part A without the required notice by applying for a minor permit revision under PCC 17.12.255 and complying with PCC 17.12.255.D.2 and G.

F. The permit shield described in PCC 17.12.310 shall not apply to any change made under this Section, other than implementation of an alternate operating scenario under XV.B.1 of Part A.

G. Notwithstanding any other part of this Section, the Control Officer may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, constitutes a change under PCC 17.12.235.A.

H. If a source change is described under both XV.B and C of Part A, the source shall comply with XV.C of Part A. If a source change is described under both subsections XV.C of Part A and PCC 17.12.235.B, the source shall comply with PCC 17.12.235.B.

I. A copy of all logs required under XV.B of Part A shall be filed with the Control Officer within 30 days after each anniversary of the permit issue date. If no changes were made at the source requiring logging, a statement to that effect shall be filed instead.

J. Logging Requirements

1. Each log entry required by a change under PCC 17.12.240.B shall include at least the following information:

a. A description of the change, including:

i. A description of any process change.

ii. A description of any equipment change, including both old and new equipment descriptions, model numbers and serial numbers, or any other unique equipment number.

iii. A description of any process material change.

PROPOSED PERMIT

b. The date and time that the change occurred.

c. The provision of PCC 17.12.240.B that authorizes the change to be made with logging.

d. The date the entry was made and the first and last name of the person making the entry.

2. Logs shall be kept for five years from the date created. Logging shall be performed in indelible ink in a bound log book with sequentially numbered pages, or in any other form, including electronic format, approved by the Control Officer.

## XVI. TESTING REQUIREMENTS [PCC 17.12.050]

A. Operational Conditions during Testing

Performance tests shall be conducted while the unit is operating at full load under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Control Officer, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in PCC 17.04.340.A.) shall not constitute representative operational conditions unless otherwise specified in the applicable requirement.

B. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual, 40 CFR 52; Appendices D and E, 40 CFR 60; Appendices A through F; and 40 CFR 61, Appendices B and C unless modified by the Control Officer pursuant to PCC 17.12.050.B. by the Director pursuant to A.A.C. R18-2-312.B.

C. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Control Officer, in accordance with PCC 17.12.050.D. and the Arizona Testing Manual.

D. Stack Sampling Facilities

The Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;

2. Safe sampling platform(s);

3. Safe access to sampling platform(s); and

4. Utilities for sampling and testing equipment.

E. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown,

PROPOSED PERMIT

failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Control Officer's approval, be determined using the arithmetic mean of the results of the other two runs. If the Control Officer or the Control Officer's designee is present, tests may only be stopped with the Control Officer's or such designee's approval. If the Control Officer or the Control Officer's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

F. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Control Officer within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and PCC 17.12.050.A.

## XVII. PROPERTY RIGHTS [PCC 17.12.185.A.7.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

## XIII. SEVERABILITY CLAUSE [PCC 17.12.185.A.6]

The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected thereby.

## XIX. ACCIDENT PREVENTION REQUIREMENTS UNDER THE CLEAN AIR ACT (CAA Section 112(r))

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the accidental release prevention regulations in Part 68, then the Permittee shall submit a risk management plan (RMP) by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68.

## XX. ASBESTOS REQUIREMENTS (Demolition/ Renovation)

Should this stationary source, pursuant to 40 CFR 61, Subpart M become subject to the National Emission Standards for Hazardous Air Pollutants - Asbestos for asbestos regulations when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR Subpart M and shall comply with all other applicable requirements of subpart M. The Permittee shall keep a record of all relevant paperwork on file. [40 CFR 61, Subpart M & PCC 17.16.530.A.8]

## XXI. STRATOSPHERIC OZONE DEPLETING SUBSTANCES

The Permittee shall not use, sell, or offer for sale any fluid as a substitute material for use in any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator or freezer unit, or other cooling or heating device designed to use a chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) compound as a working fluid, unless such fluid has been approved for sale and such use by the Administrator. The Permittee shall keep a record of all paperwork relevant to the applicable requirements of 40 CFR 82, Subpart F onsite. [40 CFR 82 & PCC 17.16.710]

PROPOSED PERMIT

# PART B: SPECIFIC PROVISIONS

[References are to Title 17 of the Pima County Code unless otherwise noted]

## I. APPLICABILITY

Affected Emission Source or Process: **Class II; Synthetic Minor Source for PM and $PM_{10}$ and $PM_{2.5}$, and a true minor for all other pollutants.**

This source is a new source and is required to operate and maintain all air pollution control equipment as part of its operational design. The limits on the Air Pollution Control (APC) equipment are all federally enforceable limitations. The affected emission sources are grouped by process type in each section. A table precedes each section's conditions outlining the equipment, processes or APC that are subject to the conditions contained in the respective section.

For a more complete description of the resulting conditions and limitations, please refer to the technical support document and the application and updates submitted for the permit.

PROPOSED PERMIT

# Part B

## Section 1

## Primary Crusher and Coarse Ore Storage

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Emission Unit ID | Emission Point ID |
|---|---|---|---|
| A | Primary Gyratory Crusher (NSPS) | PCr | PC03 |
| | Crusher Discharge Feeder (NSPS)<br>Stockpile Feed Conveyor (NSPS) | F-CD<br>CV-SF | PC05<br>PC06 |
| | Reclaim Conveyor (NSPS)<br>SAG Mill Feed Conveyor (NSPS) | CV-R<br>CV-SMF | PC11<br>PC12, PC13 |
| B | Air Pollution Control Devices<br>Crushing Area Wet Scrubber (NSPS)<br>Stockpile Area Wet Scrubber (NSPS)<br>Reclaim Tunnel Area Scrubber (NSPS) | PC-CAS<br>PC-SAS<br>PC-RTS | PCL01<br>PCL02<br>PCL03 |
| C | Materials Handling<br>Crusher Dump Hopper (NSPS)<br>Crusher Discharge Hopper (NSPS) | H-CDp<br>H-CDs | PC02<br>PC04 |
| | Stockpile Building (NSPS) | N/A | PC07, PC08, PC09 |
| | Run of Mine Stockpile (Non-NSPS) | N/A | MN01, PC01 |

### I. Emission Limitations and Standards [PCC 17.12.185.A.2]

A. Emission Group A **[Federally Enforceable & Material Permit Conditions]**

1. On and after the sixtieth day after achieving the maximum production rate at which Emission Group A will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere any process fugitive emissions that exhibit greater than 10 percent opacity. [40 CFR 60.382(b)]

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]

B. Emission Group B

1. The Permittee shall not cause to be discharged into the atmosphere any stack emissions from the NSPS wet scrubbers listed below $PM_{10}$ or particulate matter (PM) in excess of the following rates:
[PCC 17.12.190.B & 40 CFR 60.382(a)(1)]
**[Federally Enforceable & Material Permit Condition]**

PROPOSED PERMIT

a. Crushing Area Wet Scrubber (PC-CAS) – 1.28 lb/hr ($PM_{10}$)

b. Stockpile Area Wet Scrubber (PC-SAS) – 2.59 lb/hr ($PM_{10}$)

c. Reclaim Tunnel Area Scrubber (PC-RTS) – 1.07 lb/hr ($PM_{10}$)

d. PC-CAS, PC-SAS & PC-RTS – 0.05 grams per dry standard cubic meter (0.02 g/ dscm) (PM)

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any NSPS affected facility including associated air pollution control equipment (i.e. wet scrubbers) in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]
**[Federally Enforceable & Material Permit Condition]**

3. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from an affected NSPS facility (or process) any process fugitive emissions that exhibit greater than 10 percent opacity. Process fugitive emissions are emissions from an affected facility that are not collected by a capture system. [40 CFR 60.382(b)]
**[Federally Enforceable & Material Permit Condition]**

4. The Permittee shall not cause, allow or permit the effluent from NSPS wet scrubber stacks to have an average optical density equal to or greater than 20 percent opacity. [PCC 17.16.040]

5. Except as provided in Condition I.B.2 of this Section, the Permittee shall operate each wet scrubbers when the associated process equipment is operating. **[Material Permit Condition]**

C. Emission Group C

1. Opacity Limitation

a. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from an affected NSPS facility (or process) any process fugitive emissions that exhibit greater than 10 percent opacity. Process fugitive emissions are emissions from an affected facility that are not collected by a capture system. [40 CFR 60.382(b)]
**[Federally Enforceable & Material Permit Condition]**

b. The Permittee shall not cause, or permit the opacity of an emission from any Non-NSPS non-point source as measured in accordance with the Arizona Testing Manual, Reference Method 9, to exceed 20 percent. [PCC 17.16.050.B]

2. Material Handling

The Permittee shall not cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust

PROPOSED PERMIT

suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.100.A]

3. Ore Storage

a. No person shall cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.050.A]

b. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. The Permittee may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken. [PCC 17.16.050.D]

i. The Permittee may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with this provision. [PCC 17.16.050.D.1]

ii. This subsection (I.C.3.b) shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source. [PCC 17.16.050.D.2]

iii. This Condition shall not apply to the generation of airborne particulate matter from undisturbed land. [PCC 17.16.050.D.3]

c. The Permittee shall not cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.110.A]

d. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to minimize and control to ensure compliance with I.C.1.b & I.C.3 of this Section. [PCC 17.16.110.B]

## II. Monitoring Requirements [PCC 17.12.185.A.3]

A. Emission Group A **[Federally Enforceable Conditions]**

1. The Permittee shall demonstrate compliance with the opacity limitation in I.A.1 of this Section by monitoring the emissions from Emission Group A daily when the primary crusher (PCr) and/ or other processes are operating. [PCC 17.12.185.A.3.c]

2. If during the visual survey required by II.A.1 of this Section, the Permittee sees emissions from Emission Group A, that on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the emissions. If the Method 9 shows that the emissions exceed 10 percent opacity, this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

PROPOSED PERMIT

3. If during the visual survey required by II.A.1 of this Section, the Permittee does not see any emissions from Emission Group A that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey. [PCC 17.12.185.A.3.c]

4. If the six-minute opacity of the plume observed during the visual survey required by II.A.1 of this Section is 10 percent or less, then the observer shall make a record of the following: [PCC 17.12.185.A.3.c]

   a. Location, date, and time of the observation; and

   b. The results of the Method 9 observation.

5. If the six-minute opacity of the emissions observed during the visual survey required by II.A.1 of this Section exceeds 10 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to 10 percent or below. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

B. Emission Group B **[Federally Enforceable Conditions]**

1. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the change in pressure of the gas stream through the scrubbers for any affected facility using a wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals (±1 inch water) gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(a)]
**[Material Permit Condition]**

2. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the NSPS wet scrubbers for any affected facility using any type of wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on at least an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(b)]
**[Material Permit Condition]**

3. The Permittee shall demonstrate compliance with the opacity limitation in I.B.3 and 4 of this Section by monitoring the fugitive emissions from the affected facility and the point source emissions from the Air Pollution Control Devices biweekly (every two weeks) when equipment and/or processes are in normal operating mode. [PCC 17.12.185.A.3.c]

4. If during the visual survey required by II.B.3 of this Section, the Permittee sees any process fugitive emissions from an affected facility that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the plume. If the Method 9 shows that the emissions exceed 10 percent opacity, this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

5. If during the visual survey required by II.B.3 of this Section, the Permittee sees a plume from wet scrubber stacks that, on an instantaneous basis, appears to exceed 20 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the plume. If the Method 9 shows that the emissions exceed 20 percent opacity, this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

PROPOSED PERMIT

6. If during the visual survey required by II.B.3 of this Section, the Permittee does not see any process fugitives emissions or emissions from the NSPS wet scrubber stacks that, on an instantaneous basis, appear to exceed 10 percent opacity or 20 percent opacity respectively, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey.

[PCC 17.12.185.A.3.c]

7. If the six-minute opacity of the plume observed during the visual survey required by II.B.3 of this Section is less than 10 percent opacity for process fugitives or less than 20 percent from the wet scrubber stacks, then the observer shall make a record of the following: [PCC 17.12.185.A.3.c]

   a. Location, date, and time of the observation; and

   b. The results of the Method 9 observation.

8. If the six-minute opacity from process fugitives or the wet scrubber stack plume observed during the visual survey required by II.B.3 of this Section exceeds 10 percent or 20 percent respectively, then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation.

[PCC 17.12.185.A.3.c]

C. Emission Group C

Materials Handling

1. The Permittee shall demonstrate compliance with the opacity limitations in I.C.1 and 2 of this Section by monitoring the fugitive[1] and process fugitive emissions from the affected facilities biweekly (every two weeks) when equipment and/or processes are in normal operating mode.

. [PCC 17.12.185.A.3.c]

2. If during the visual survey required by II.C.1 of this Section, the Permittee sees any fugitive (Stockpile Building) or process fugitive emissions (Hoppers) from an NSPS affected facility that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the emissions. If the Method 9 shows that the emissions exceed 10 percent opacity, this shall be recorded and reported as an excess emission and permit deviation.

[PCC 17.12.185.A.3.c]

3. If during the visual survey required by II.C.1 of this Section, the Permittee sees fugitive emissions from the Run of Mine Stockpile that, on an instantaneous basis, appear to exceed 20 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the plume. If the Method 9 shows that the emissions exceed 20 percent opacity, this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

4. If during the visual survey required by II.C.1 of this Section, the Permittee does not see any fugitive (Stockpile Building) or process fugitive emissions from the NSPS affected facilities that, on an instantaneous basis, appear to exceed 10 percent opacity OR does not see any fugitive emissions from the Run of Mine Stockpile that on an instantaneous basis, appear to exceed 20 percent opacity, then the Permittee shall keep a record of the name of the observer, the date and time that the visual survey was made, the location, and the results of the visual survey.

[PCC 17.12.185.A.3.c]

[1] EPA Determination Detail Control #0500092. See the Technical Support Document accompanying this permit.

PROPOSED PERMIT

5. If the six-minute opacity observation of any NSPS affected facility observed during the visual survey required in II.C.1 of this Section is less than 10 percent or less than 20 percent if observing the Run of Mine Stockpile, then the Permittee shall make a record of the following:
[PCC 17.12.185.A.3.c]

   a. location, date, and time of the observation; and

   b. the results of the Method 9 observation.

6. If the six-minute opacity observation observed during the visual survey required in II.C.1 of this Section exceeds 10 percent for the fugitive emissions or 20 percent from the Run of Mine Stockpile, then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation.
[PCC 17.12.185.A.3.c]

## III. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Emission Group A **[Federally Enforceable Condition]**

Follow recordkeeping described in the Monitoring Requirements for Emission Group A in II.A.2 – 5 of this Section.

B. Emission Group B

1. During the initial performance test of the NSPS wet scrubbers and at least weekly thereafter, the Permittee shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate. [40 CFR 60.385(b)]
**[Federally Enforceable Condition]**

2. Follow recordkeeping described in the Monitoring Requirements for Emission Group B in II.B.4 – 8 of this Section.

C. Emission Group C

Follow recordkeeping described in the Monitoring Requirements for Emission Group C in II.C.2 – 6 of this Section.

## IV. Reporting Requirements [PCC 17.12.185.A.5]

A. Emission Group A **[Federally Enforceable Condition]**

1. Submittal of initial performance test results as required in V.A.1 of this Section.

B. Emission Group B **[Federally Enforceable Condition]**

1. After the initial performance test of the NSPS wet scrubbers, the Permittee shall submit semiannual reports to the Control Officer of occurrences when the measurements of the scrubber pressure loss

PROPOSED PERMIT

(or gain) or liquid flow rate differ by more than ±30 percent from the average obtained during the most recent performance test. [40 CFR 60.385(c)]

2. The reports required in IV.B.1 above shall be postmarked within 30 days following the end of the second and fourth calendar quarters. (within 30 days following end of June and December). [40 CFR 60.385(d)]

3. All federal reporting requirements in IV.A.1, IV.B.1 and IV.B.2 remain in force until and unless the Agency, in delegating enforcement authority to the Control Officer under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by the Control Officer. In that event, affected sources will be relieved of the obligation to comply with IV.B and V.A.1 of this Section, provided that they comply with requirements established by the Control Officer. [40 CFR 60.385(e)]

C. Emission Group C

Follow general reporting requirements in IV.D of this Section.

D. All Emission Groups

The Permittee shall promptly report and submit reports of excess emissions and permit deviations as described in X.A of Part A.

## V. Testing Requirements [PCC 17.12.185.A.3]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a facility would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.20.010]

A Emission Groups A & B **[Federally Enforceable Conditions]**

1. In conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in this Section, except as provided in 40 CFR 60.8(b). [40 CFR 60.386]

2. The Permittee shall conduct a performance test and submit to the Control Officer a written report of the results of the test as specified in 40 CFR 60.8(a). [40 CFR 60.385(a)]

3. The Permittee shall determine compliance with the particulate matter standards in I.B.1 of this Section as follows: [40 CFR 60.386(b)]

   a. In order to show compliance with I.B.1 of this Section, the Permittee shall conduct a $PM_{10}$ and particulate matter (PM) performance test on the NSPS Scrubbers at least once per five-year permit term. [PCC 17.20.010]

   b. Method 5 or 17 shall be used to determine the particulate matter concentration. The sample volume for each run shall be at least 1.70 dscm (60 dscf). The sampling probe and filter holder of Method 5 may be operated without heaters if the gas stream being sampled is at ambient

PROPOSED PERMIT

temperature. For gas streams above ambient temperature, the Method 5 sampling train shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121°C (250°F)) in order to prevent water condensation on the filter. [40 CFR 60.386(b)(1)]

c. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed. [40 CFR 60.386(b)(2)]

d. Method 5 and Method 201A/ 202 shall be used to determine the $PM_{10}$ concentration. The Permittee shall follow all EPA testing procedures for this method when conducting all required performance tests. [PCC 17.20.010]

4. To comply with IV.B.1 of this Section, the Permittee shall use the monitoring devices in II.B.1 and II.B.2 of this Section to determine the pressure loss of the gas stream through the NSPS scrubbers and scrubbing liquid flow rate at any time during each particulate matter run and the average of the three determinations shall be computed. [40 CFR 60.386(c)]

PROPOSED PERMIT

# Part B

## Section 2

## Pebble Crusher

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Emission Unit ID | Emission Point Number(s) |
|---|---|---|---|
| A | Pebble Crusher (NSPS) | PbC | M10, M11 |
| | Pebble Conveyor No 2 (NSPS) | CV-Pb2 | M07 |
| | Pebble Conveyor No 3 (NSPS) | CV-Pb3 | M12 |
| | Pebble Crusher Feeder (NSPS) | F-PbC | M09 |
| | SAG Oversize Surge Bin (NSPS) | B-SAGOS | M08 |
| | SAG Mill (NSPS) | M-SAG | M01 |
| | Trommel Screen (NSPS) | Sn-T | M03 |
| | Pebble Conveyor No 1 (NSPS) | CV-Pb1 | M04 |
| | Pebble Wash Screen (NSPS) | Sn-PbW | M05, M06 |
| B | Air Pollution Control Devices<br>Pebble Crusher Area Scrubber (NSPS) | PC-PCAS | PCL04 |

### I. Emission Limitations and Standards [PCC 17.12.185.A.2]

A. Emission Group A **[Federally Enforceable & Material Permit Conditions]**

1. On and after the sixtieth day after achieving the maximum production rate at which Emission Group A will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere any process fugitive emissions that exhibit greater than 10 percent opacity. [40 CFR 60.382(b)]

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]

B. Emission Group B

1. The Permittee shall not cause to be discharged into the atmosphere any stack emissions from the Pebble Crusher Area Scrubber (PC-PCAS) $PM_{10}$ or particulate matter (PM) in excess of 1.56 lb/hr or 0.05 grams per dry standard cubic meter (0.02 g/ dscm) respectively.
[PCC 17.12.190.B & 40 CFR 60.382(a)(1)]
**[Federally Enforceable & Material Permit Condition]**

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any NSPS affected facility including associated air

PROPOSED PERMIT

pollution control equipment (i.e. wet scrubbers) in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]

**[Federally Enforceable & Material Permit Condition]**

3. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from an affected NSPS facility (or process) any process fugitive emissions that exhibit greater than 10 percent opacity. Process fugitive emissions are emissions from an affected facility that are not collected by a capture system. [40 CFR 60.382(b)]

**[Federally Enforceable & Material Permit Condition]**

4. The Permittee shall not cause, allow or permit the effluent from NSPS wet scrubber stacks to have an average optical density equal to or greater than 20 percent opacity. [PCC 17.16.040]

5. Except as provided in I.B.2 of this Section, the Permittee shall operate each wet scrubber when the associated process equipment is operating.

**[Federally Enforceable & Material Permit Condition]**

## II. Monitoring Requirements [PCC 17.12.185.A.3]

A. Emission Group A **[Federally Enforceable Conditions]**

1. When operated as wet or clean ore, the Permittee is not required to monitor emissions from all operations identified as clean, wet ore and/ or wet processes. The Permittee shall monitor emissions from these processes if operated without sufficient moisture to categorize operations as clean, wet ore and/ or wet processes.

2. The Permittee shall demonstrate compliance with the opacity limitation in I.A.1 of this Section by monitoring the emissions from Emission Group A daily when the primary crusher (PCr) and/ or other processes are operating. [PCC 17.12.185.A.3.c]

3. If during the visual survey required by II.A.1 of this Section, the observer sees emissions from Emission Group A, that on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the emissions. If the emissions are 10 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

4. If during the visual survey required by II.A.1 of this Section, the Permittee does not see any emissions from Emission Group A that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey. [PCC 17.12.185.A.3.c]

5. If the six-minute opacity of the plume observed during the visual survey required by II.A.1 of this Section is less than the 10 percent, then the observer shall make a record of the following: [PCC 17.12.185.A.3.c]

   a. Location, date, and time of the observation; and

   b. The results of the Method 9 observation.

PROPOSED PERMIT

6. If the six-minute opacity of the emissions observed during the visual survey required by II.A.1 of this Section exceeds 10 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below 10 percent. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

B. Emission Group B

1. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the change in pressure of the gas stream through the scrubbers for any affected facility using a wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals (±1 inch water) gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(a)]
**[Federally Enforceable & Material Permit Condition]**

2. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the NSPS wet scrubbers for any affected facility using any type of wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on at least an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(b)]
**[Federally Enforceable & Material Permit Condition]**

3. The Permittee shall demonstrate compliance with the opacity limitation in I.B.3 and 4 of this Section by monitoring the fugitive emissions from the affected facility and the point source emissions from the Air Pollution Control Devices biweekly (every two weeks) when equipment and/or processes are in normal operating mode. [PCC 17.12.185.A.3.c]

4. If during the visual survey required by II.B.3 of this Section, the Permittee sees any process fugitive emissions from an affected facility that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the plume. If the emissions are 10 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]
**[Federally Enforceable Condition]**

5. If during the visual survey required by II.B.3 of this Section, the Permittee sees a plume from wet scrubber stacks that, on an instantaneous basis, appears to exceed 20 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the plume. If the emissions are 20 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

6. If during the visual survey required by II.B.3 of this Section, the Permittee does not see any emissions from the NSPS wet scrubber stacks that, on an instantaneous basis, appear to exceed 20 percent opacity, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey. [PCC 17.12.185.A.3.c]

7. If the six-minute opacity of the plume required by II.B.3 of this Section is less than the 20 percent, then the observer shall make a record of the following: [PCC 17.12.185.A.3.c]

   a. Location, date, and time of the observation; and

PROPOSED PERMIT

b. The results of the Method 9 observation.

8. If the six-minute opacity of the plume required by II.B.3 of this Section exceeds 20 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

## III. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Emission Group A **[Federally Enforceable Condition]**

Follow recordkeeping described in the Monitoring Requirements for Emission Group A in II.A.3 – 6 of this Section.

B. Emission Group B

1. During the initial performance test of the NSPS wet scrubbers and at least weekly thereafter, the Permittee shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate. [40 CFR 60.385(b)]
**[Federally Enforceable Condition]**

2. Follow recordkeeping described in the Monitoring Requirements for Emission Group B in II.B.4 – 8 of this Section.

## IV. Reporting Requirements [PCC 17.12.185.A.5]

A. Emission Group A **[Federally Enforceable Condition]**

1. Submittal of initial performance test results as required in V.A.1 of this Section.

B. Emission Group B **[Federally Enforceable Condition]**

1. After the initial performance test of the NSPS wet scrubbers, the Permittee shall submit semiannual reports to the Control Officer of occurrences when the measurements of the scrubber pressure loss (or gain) or liquid flow rate differ by more than ±30 percent from the average obtained during the most recent performance test. [40 CFR 60.385(c)]

2. The reports required in IV.B.1 above shall be postmarked within 30 days following the end of the second and fourth calendar quarters. (within 30 days following end of June and December). [40 CFR 60.385(d)]

3. All federal reporting requirements in IV.B.1 and V.A.2 of this Section remain in force until and unless the Agency, in delegating enforcement authority to the Control Officer under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by the Control Officer. In that event, affected sources will be relieved of the obligation to comply with IV.B and V.A.1 of this Section, provided that they comply with requirements established by the Control Officer. [40 CFR 60.385(e)]

PROPOSED PERMIT

C. All Emission Groups

The Permittee shall promptly report and submit reports of excess emissions and permit deviations as described in X.A of Part A.

## V. Testing Requirements [PCC 17.12.185.A.3]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a facility would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.20.010]

A. Emission Groups A & B **[Federally Enforceable Conditions]**

1. In conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in this Section, except as provided in 40 CFR 60.8(b). [40 CFR 60.386]

2. The Permittee shall conduct a performance test and submit to the Control Officer a written report of the results of the test as specified in 40 CFR 60.8(a). [40 CFR 60.385(a)]

3. The Permittee shall determine compliance with the $PM_{10}$ and particulate matter (PM) standards in I.B.1 of this Section as follows: [40 CFR 60.386(b)]

   a. In order to show compliance with I.B.1 of this Section, the Permittee shall conduct a particulate matter performance test on the NSPS Scrubber at least once per five-year permit term. [PCC 17.20.010]

   b. Method 5 or 17 shall be used to determine the particulate matter concentration. The sample volume for each run shall be at least 1.70 dscm (60 dscf). The sampling probe and filter holder of Method 5 may be operated without heaters if the gas stream being sampled is at ambient temperature. For gas streams above ambient temperature, the Method 5 sampling train shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121°C (250°F)) in order to prevent water condensation on the filter. [40 CFR 60.386(b)(1)]

   c. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed. [40 CFR 60.386(b)(2)]

   d. Method 5 and Method 201A/ 202 shall be used to determine the $PM_{10}$ concentration. The Permittee shall follow all EPA testing procedures for this method when conducting all required performance tests. [PCC 17.20.010]

4. To comply with IV.B.1 of this Section, the Permittee shall use the monitoring devices in II.B.1 and II.B.2 of this Section to determine the pressure loss of the gas stream through the NSPS scrubbers and scrubbing liquid flow rate at any time during each particulate matter run and the average of the three determinations shall be computed. [40 CFR 60.386(c)]

PROPOSED PERMIT

# Part B

## Section 3

## Copper Concentrate Dewatering

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Emission Unit ID | Emission Point Number(s) |
|---|---|---|---|
| A | Air Pollution Control Devices (NSPS)<br>Copper Concentrate Wet Scrubber 1<br>Copper Concentrate Wet Scrubber 2 | <br>PC-CCS1<br>PC-CCS2 | <br>PCL05<br>PCL06 |
| B | Material Handling (NSPS)<br>Filter Feed Trash Screen<br>Copper Concentrate Filters<br>Copper Concentrate Conveyor<br>Copper Concentrate Loadout Building (CCLB) | <br>Sn-FFT<br>Ft-CC1/ CC4<br>CV-CC | <br>N/A<br>N/A<br>CCD01<br>CCD02, CCD03 |

### I. Emission Limitations and Standards [PCC 17.12.185.A.2]

A. Emission Group A **[Federally Enforceable Conditions]**

1. The Permittee shall not cause to be discharged into the atmosphere any stack emissions from the NSPS wet scrubbers listed below $PM_{10}$ or particulate matter (PM) in excess of the following rates: [PCC 17.12.190.B & 40 CFR 60.382(a)(1)] **[Material Permit Condition]**

   a. Copper Concentrate Wet Scrubber 1 (PC-CCS1) – 3.55 lb/hr ($PM_{10}$)

   b. Copper Concentrate Wet Scrubber 2 (PC-CCS2) – 3.55 lb/hr ($PM_{10}$)

   c. PC-CCS1 & PC-CCS2 – 0.05 grams per dry standard cubic meter (0.02 g/ dscm) (PM)

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any NSPS affected facility including associated air pollution control equipment (i.e. wet scrubbers) in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)] **[Material Permit Condition]**

3. The Permittee shall not cause, allow or permit the effluent from NSPS wet scrubber stacks to have an average optical density equal to or greater than 20 percent opacity. [PCC 17.16.040]

4. Except as provided in II.A.2 of this Section, the Permittee shall operate each wet scrubber when the associated process equipment is operating. **[Material Permit Condition]**

PROPOSED PERMIT

B. Emission Group B

1. Opacity Limitation

On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from an affected NSPS facility any process fugitive emissions that exhibit greater than 10 percent opacity. Process fugitive emissions are emissions from an affected facility that are not collected by a capture system. [40 CFR 60.382(b)]

**[Federally Enforceable & Material Permit Condition]**

2. Material Handling

The Permittee shall not cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.100.A]

3. Ore Storage

a. The Permittee shall not cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.050.A]

b. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. The Permittee may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken. [PCC 17.16.050.D]

i. The Permittee may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with this provision. [PCC 17.16.050.D.1]

ii. This subsection (I.B.3.b) shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source. [PCC 17.16.050.D.2]

iii. This Condition shall not apply to the generation of airborne particulate matter from undisturbed land. [PCC 17.16.050.D.3]

c. The Permittee shall not cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.110.A]

d. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to minimize and control to ensure compliance with I.B.1.b & I.B.3 of this Section. [PCC 17.16.110.B]

PROPOSED PERMIT

## II. Monitoring Requirements [PCC 17.12.185.A.3]

A. Emission Group A

1. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the change in pressure of the gas stream through the scrubbers for any affected facility using a wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals (±1 inch water) gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(a)]
**[Federally Enforceable & Material Permit Condition]**

2. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the NSPS wet scrubbers for any affected facility using any type of wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on at least an annual basis in accordance with manufacturer's instructions.
[40 CFR 60.384(b)]
**[Federally Enforceable & Material Permit Condition]**

3. The Permittee shall demonstrate compliance with the opacity limitation in I.A.3 of this Section by monitoring the point source emissions from the NSPS Air Pollution Control Devices biweekly (every two weeks) when equipment and/or processes are in normal operating mode.
[PCC 17.12.185.A.3.c]

4. If during the visual survey required by II.A.3 of this Section, the Permittee sees a plume from any NSPS wet scrubber stacks that, on an instantaneous basis, appears to exceed 20 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the plume. If the emissions are 20 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

6. If during the visual survey required by II.A3 of this Section, the Permittee does not see any emissions from the NSPS wet scrubber stacks that, on an instantaneous basis, appear to exceed 20 percent opacity, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey.[PCC 17.12.185.A.3.c]

7. If the six-minute opacity of the plume observed during the visual survey required by II.A.3 of this Section, is less than 20 percent opacity, then the Permittee shall make a record of the following:
[PCC 17.12.185.A.3.c]

   a. Location, date, and time of the observation; and

   b. The results of the Method 9 observation.

8. If the six-minute opacity of the plume observed during the visual survey required by II.A.3 of this Section, exceeds 20 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

PROPOSED PERMIT

B. Emission Group B

Materials Handling

1. When operated as a wet process, the Permittee is not required to monitor emissions from the Filter Feed Trash Screen (Sn-FFT). The Permittee shall monitor emissions from these processes if operated without sufficient moisture to categorize operations as clean, wet ore and/ or wet processes.

2. The Permittee shall demonstrate compliance with the opacity limitations in I.B.1 of this Section by monitoring the fugitive emissions from the CCLB[2] biweekly (every two weeks) during normal operations while copper concentrate is unloading from the copper concentrate conveyor belt (CV-CC). [PCC 17.12.185.A.3.c]

3. If during the visual survey required by II.B.2 of this Section, the Permittee sees any fugitive emissions from the CCLB that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the emissions. If during the visual survey required by II.B.2 of this Section, the emissions exceed 10 percent opacity this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

4. If during the visual survey required by II.B.2 of this Section, the Permittee does not see any fugitive emissions from the CCLB that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall keep a record of the name of the observer, the date and time that the visual survey was made, the location, and the results of the visual survey. [PCC 17.12.185.A.3.c]

5. If the six-minute opacity observation of any NSPS affected facility required by II.B.2 of this Section is less than 10 percent, then the Permittee shall make a record of the following: [PCC 17.12.185.A.3.c]

   a. location, date, and time of the observation; and

   b. the results of the Method 9 observation.

6. If the six-minute opacity observation required by II.B.2 of this Section, exceeds 10 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the CCLB and surrounding processes to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

## III. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Emission Group A **[Federally Enforceable Conditions]**

1. During the initial performance test of the NSPS wet scrubbers and at least weekly thereafter, the Permittee shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate. [40 CFR 60.385(b)]

2. The Permittee shall follow the recordkeeping described in the Monitoring Requirements for Emission Group A in II.A.4 – 8 of this Section.

[2] EPA Determination Detail Control #0500092. See the Technical Support Document accompanying this permit.

PROPOSED PERMIT

B. Emission Group B

The Permittee shall follow the recordkeeping described in the Monitoring Requirements for Emission Group B in II.B.3 – 6 of this Section.

## IV. Reporting Requirements [PCC 17.12.185.A.5]

A. Emission Group A **[Federally Enforceable Conditions]**

1. After the initial performance test of the NSPS wet scrubbers, the Permittee shall submit semiannual reports to the Control Officer of occurrences when the measurements of the scrubber pressure loss (or gain) or liquid flow rate differ by more than ±30 percent from the average obtained during the most recent performance test. [40 CFR 60.385(c)]

2. The reports required in IV.A.1 above shall be postmarked within 30 days following the end of the second and fourth calendar quarters. (within 30 days following end of June and December). [40 CFR 60.385(d)]

3. All federal reporting requirements in IV and V.A.2 of this Section remain in force until and unless the Agency, in delegating enforcement authority to the Control Officer under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by the Control Officer. In that event, affected sources will be relieved of the obligation to comply with IV and V.A.1 of this Section, provided that they comply with requirements established by the Control Officer. [40 CFR 60.385(e)]

B. Emission Group B

The Permittee shall follow the reporting requirements in IV.C.

C. All Emission Groups

The Permittee shall promptly report and submit reports of excess emissions and permit deviations as described in X.A of Part A.

## V. Testing Requirements [PCC 17.12.185.A.3]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a facility would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.20.010]

A Emission Groups A & B **[Federally Enforceable Conditions]**

1. In conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in this Section, except as provided in 40 CFR 60.8(b). [40 CFR 60.386]

PROPOSED PERMIT

2. The Permittee shall conduct a performance test and submit to the Control Officer a written report of the results of the test as specified in 40 CFR 60.8(a). [40 CFR 60.385(a)]

3. The Permittee shall determine compliance with the particulate matter standards in I.A.1 of this Section as follows: [40 CFR 60.386(b)]

   a. In order to show compliance with I.A.1 of this Section, the Permittee shall conduct a $PM_{10}$ and particulate matter (PM) performance test on the NSPS Scrubbers at least once per five-year permit term. [PCC 17.20.010]

   b. Method 5 or 17 shall be used to determine the particulate matter concentration. The sample volume for each run shall be at least 1.70 dscm (60 dscf). The sampling probe and filter holder of Method 5 may be operated without heaters if the gas stream being sampled is at ambient temperature. For gas streams above ambient temperature, the Method 5 sampling train shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121°C (250°F)) in order to prevent water condensation on the filter. [40 CFR 60.386(b)(1)]

   c. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed. [40 CFR 60.386(b)(2)]

   d. Method 5 and Method 201A/ 202 shall be used to determine the $PM_{10}$ concentration. The Permittee shall follow all EPA testing procedures for this method when conducting all required performance tests. [PCC 17.20.010]

4. To comply with IV.B.1 of this Section, the Permittee shall use the monitoring devices in II.B.1 and II.B.2 of this Section to determine the pressure loss of the gas stream through the NSPS scrubbers and scrubbing liquid flow rate at any time during each particulate matter run and the average of the three determinations shall be computed. [40 CFR 60.386(c)]

PROPOSED PERMIT

# Part B

## Section 4

## Molybdenum Concentrate Dewatering

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Emission Unit ID | Emission Point Number(s) |
|---|---|---|---|
| A | Material Handling - NSPS<br>Molybdenum Concentrate Dryer<br>Molybdenum Concentrate Bin<br>Molybdenum Concentrate Hopper<br>Molybdenum Concentrate Conveyor<br>Molybdenum Packaging and Weigh System (MPS) | <br>MD01, MD02<br>Ft-MC, CV-MC<br>B-MC<br>H-MC<br>CV-MC<br>MPS | <br>D-MC<br>N/A<br>MD03<br>MD04<br>MD05<br>MD06 |
| B | Air Pollution Control Devices - NSPS<br>Molybdenum Scrubber<br>Electrostatic Precipitator<br>Molybdenum Dust Collector | <br>PC-MS<br>PC-EP<br>PC-MDC | <br>PCL07<br>PCL07<br>PCL08 |

**I. Emission Limitations and Standards** [PCC 17.12.185.A.2]

A. Emission Group A

a. On and after the sixtieth day after achieving the maximum production rate at which the NSPS screens and conveyors will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere any process fugitive emissions that exhibit greater than 10 percent opacity. [40 CFR 60.382(b)]
**[Federally Enforceable & Material Permit Conditions]**

b. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]

B. Emission Group B

1. On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere any stack emissions that: **[Federally Enforceable Condition]**

PROPOSED PERMIT

a. are in excess of the following rates: [PCC 17.12.190.B & 40 CFR 60.382(a)(1)]

i. Molybdenum Scrubber/ Electrostatic Precipitator (PC-MS/PC-EP) – 0.02 lb/hr. ($PM_{10}$)

ii. Molybdenum Dust Collector (PC-MDC) – 0.010 grains/dscf. (PM)

b. exhibit greater than 7 percent opacity from the Molybdenum Dust Collector. [40 CFR 60.382(a)(2)]
**[Material Permit Condition]**

c. have an average optical density equal to or greater than 20 percent opacity from the Molybdenum Scrubber/ Electrostatic Precipitator (MS/ESP).

*Pursuant to 40 CFR 60.382.(a)(2), the* MS/ESP *is not subject to the NSPS opacity limit of 7%. The stack emissions are discharged from a wet scrubbing emission control device (WSECD), therefore the* MS/ESP *is only subject to the local opacity standard.* [PCC 17.16.040]
**[Locally Enforceable Condition only]**

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any NSPS affected facility including associated air pollution control equipment (i.e. scrubbers, ESP and dust collector) in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]
**[Federally Enforceable & Material Permit Condition]**

3. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from an affected NSPS facility (or process), except wet scrubbers, any process fugitive emissions that exhibit greater than 10 percent opacity. Process fugitive emissions are emissions from an affected facility that are not collected by a capture system. [40 CFR 60.382(b)]
**[Federally Enforceable & Material Permit Condition]**

4. Except as provided in I.B.2 of this Section, the Permittee shall operate the respective pollution control equipment at all times that the operation/ process controlled by that scrubber is operating. For example, when the Molybdenum Packing and Weighing System is operating, the Molybdenum Dust Collector (PC-MDC) shall begin operating prior to the start of the MPS operations.

## II. Monitoring Requirements [PCC 17.12.185.A.3]

A. Emission Group A – Material Handling **[Federally Enforceable Conditions]**

1. The Permittee shall demonstrate compliance with the opacity limitation in I.A.1 of this Section by monitoring the emissions from the exterior of the building housing[3] the Molybdenum operations biweekly (every two weeks) when equipment and/or processes are in normal operating mode. [PCC 17.12.185.A.3.c]

2. If during the visual survey required in II.A.1 of this Section, the observer sees emissions from the Molybdenum Concentrate Dryer, that on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the emissions. If the

[3] EPA Determination Detail Control #0500092. See the Technical Support Document accompanying this permit.



PROPOSED PERMIT

emissions are 10 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation. [PCC 17.12.185.A.3.c]

3. If during the visual survey required in II.A.1 of this Section, the Permittee does not see any emissions from the NSPS screens and conveyors that, on an instantaneous basis, appear to exceed 10 percent opacity, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey.[PCC 17.12.185.A.3.c]

4. If the six-minute opacity of the plume observed during the visual survey required in II.A.1 of this Section is less than 10 percent, then the observer shall make a record of the following: [PCC 17.12.185.A.3.c]

   a. Location, date, and time of the observation; and

   b. The results of the Method 9 observation.

5. If the six-minute opacity of the emissions observed during the visual survey required in II.A.1 of this Section exceeds 10 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below 10 percent. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

B. Emission Group B

1. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the change in pressure of the gas stream through the scrubbers for any affected facility using a wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals (±1 inch water) gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(a)]
**[Federally Enforceable & Material Permit Condition]**

2. The Permittee shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the NSPS wet scrubbers for any affected facility using any type of wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on at least an annual basis in accordance with manufacturer's instructions. [40 CFR 60.384(b)]
**[Federally Enforceable & Material Permit Condition]**

3. The Permittee shall demonstrate compliance with the opacity limitation in I.B.1.b & c of this Section by monitoring the point source emissions from the NSPS Air Pollution Control Devices biweekly (every two weeks) when equipment and/or processes are in normal operating mode. [PCC 17.12.185.A.3.c]
**[Federally Enforceable Condition]**

4. If during the visual survey required in II.B.3 of this Section, the Permittee sees a plume from any NSPS stack that, on an instantaneous basis, appears to exceed: [PCC 17.12.185.A.3.c]

   a. 7 percent opacity from an emission control device other than the MS/ESP, then the Permittee shall take a six-minute Method 9 observation of the plume. If the emissions are 7 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation. **[Federally Enforceable Condition]**

PROPOSED PERMIT

b. 20 percent opacity from the MS/ESP, then the Permittee shall take a six-minute Method 9 observation of the plume. If the emissions are 20 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation.

5. If during the visual survey required in II.B.3 of this Section, the Permittee does not see any emissions from:

   a. a control device other than an MS/ESP stack that, on an instantaneous basis, appear to exceed 7 percent opacity, OR

   b. a MS/ESP stack that, on an instantaneous basis, appear to exceed 20 percent opacity,

   then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey. [PCC 17.12.185.A.3.c]

6. If the six-minute opacity of the plume observed during the survey required in II.B.3 of this Section, is less than: [PCC 17.12.185.A.3.c]

   a. 7 percent opacity from a control device other than an MS/ESP stack, OR

   b. 20 percent opacity from a MS/ESP stack,

   then the observer shall make a record of the following

   c. Location, date, and time of the observation; and

   d. The results of the Method 9 observation.

7. If the six-minute opacity of the plume observed during the survey required in II.B.3 of this Section exceeds the above opacity standards, then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process or processes to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation. [PCC 17.12.185.A.3.c]

## III. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Emissions Group A **[Federally Enforceable Conditions]**

The Permittee shall follow recordkeeping described in the Monitoring Requirements for Emission Group A in II.A.2 – 5 of this Section.

B. Emissions Group B

1. During the initial performance test of the NSPS wet scrubbers and at least weekly thereafter, the Permittee shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate. [40 CFR 60.385(b)]
**[Federally Enforceable Condition]**

2. The Permittee shall follow the recordkeeping described in the Monitoring Requirements for Emission Group B in II.B.4 – 7 of this Section.

PROPOSED PERMIT

## IV. Reporting Requirements [PCC 17.12.185.A.5]

A. Emissions Group A **[Federally Enforceable Condition]**

The Permittee shall submit initial performance test results as required in V.A.2 of this Section.

B. Emissions Group B **[Federally Enforceable Conditions]**

1. After the initial performance test of the NSPS wet scrubbers, the Permittee shall submit semiannual reports to the Control Officer of occurrences when the measurements of the scrubber pressure loss (or gain) or liquid flow rate differ by more than ±30 percent from the average obtained during the most recent performance test. [40 CFR 60.385(c)]

2. The reports required in IV.B.1 above shall be postmarked within 30 days following the end of the second and fourth calendar quarters. (within 30 days following end of June and December). [40 CFR 60.385(d)]

3. All federal reporting requirements in IV.B and V.A.2 of this Section remain in force until and unless the Agency, in delegating enforcement authority to the Control Officer under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by the Control Officer. In that event, affected sources will be relieved of the obligation to comply with IV and V.A.1 of this Section, provided that they comply with requirements established by the Control Officer. [40 CFR 60.385(e)]

C. All Emission Groups

The Permittee shall promptly report and submit reports of excess emissions as described in X.A of Part A.

## V. Testing Requirements [PCC 17.12.185.A.3]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a facility would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.20.010]

A. All Emission Groups **[Federally Enforceable Conditions]**

1. In conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in this Section, except as provided in 40 CFR 60.8(b). [40 CFR 60.386]

2. The Permittee shall conduct a performance test and submit to the Control Officer a written report of the results of the test as specified in 40 CFR 60.8(a). [40 CFR 60.385(a)]

3. The Permittee shall determine compliance with the particulate matter standards in I.B.1.a of this Section as follows: [40 CFR 60.386(b)]

PROPOSED PERMIT

a. The Permittee shall conduct a $PM_{10}$ and particulate matter (PM) performance test on the NSPS Scrubbers at least once per five-year permit term. [PCC 17.20.010]

b. Method 5 or 17 shall be used to determine the particulate matter concentration. The sample volume for each run shall be at least 1.70 dscm (60 dscf). The sampling probe and filter holder of Method 5 may be operated without heaters if the gas stream being sampled is at ambient temperature. For gas streams above ambient temperature, the Method 5 sampling train shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121°C (250°F)) in order to prevent water condensation on the filter. [40 CFR 60.386(b)(1)]

c. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are clearly identified as emanating solely from the affected facility being observed. [40 CFR 60.386(b)(2)]

d. Method 5 and Method 201A/ 202 shall be used to determine the $PM_{10}$ concentration. The Permittee shall follow all EPA testing procedures for this method when conducting all required performance tests. [PCC 17.20.010]

4. To comply with IV.B.1 of this Section, the Permittee shall use the monitoring devices in II.B.1 and II.B.2 of this Section to determine the pressure loss of the gas stream through the NSPS scrubbers and scrubbing liquid flow rate at any time during each particulate matter run and the average of the three determinations shall be computed. [40 CFR 60.386(c)]

PROPOSED PERMIT

# Part B

## Section 5

## Mining Operations

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Emission Point(s) |
|---|---|---|
| A | Mineral Tailings | Common To Tailing Location |
| | Vehicles on Unpaved Surfaces<br>Loading & Unloading of Ore and Waste Rock | MN06-MN08<br><br>MN03-MN05, MN10 |
| | Drilling,<br>Blasting | MN01<br>MN02 |
| | All Other Fugitive Sources/ Processes | MN09, MN10, MN11 - MN14 |
| | Demolition/ Renovation | Common to Tailing Location |

### I. Emission Limitations and Standards

A. Upon approval by the Control Officer of the Dry Stack Tailings Management Plan (DSTMP) and the Fugitive Dust Management Plan (FDMP) required below, the Permittee shall implement the plans to control fugitive dust from the mine. [PCC 17.12.185.A.2]

1. The Permittee shall submit the DSTMP & FDMP within 180 calendar days of permit issuance, for approval by the Control Officer. [PCC 17.12.185.A.2 & 17.12.185.A.4]

   a. The DSTMP shall address the following operational requirements:

      i. Dry Stack Tailings dust control during normal non-berm building mine tailing operations;

      ii. Dry Stack Tailings dust control during berm building;

   b. The FDMP shall address the following operational requirements:

      i. Dust Control for vehicles on unpaved surfaces;

      ii. Dust Control during all other fugitive emissions operations, (e.g. Drilling & Blasting, truck dumping).

B. Mineral Tailings

1. The Control Officer may require that the Permittee make changes to the Dust Management Plan should the Control Officer find that the plan fails to provide adequate air pollution control or that the air pollution control techniques are no longer effective in controlling fugitive emissions as identified in I.D of this Section. [PCC 17.12.185.A.2]

PROPOSED PERMIT

2. Should the Permittee determine that revisions to the approved Dust Management Plan are necessary; such revisions shall not become effective until the Permittee submits a description of the changes and a revised plan to the Control Officer for approval. The revised plan shall become effective upon review and approval by the Control Officer. [PCC 17.12.185.A.2]

3. The Permittee shall not cause, suffer, allow, or permit construction of mineral tailing piles without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, re-vegetation or such other measures as are approved by the Control Officer. [PCC 17.16.120.A]

4. The Permittee shall not cause, suffer, allow, or permit construction of mineral tailings piles without taking reasonable precautions (i.e. wetting, chemical stabilization, application of wet tailings or re-vegetation) to minimize and control to ensure compliance with I.D.1.c, I.D.1.d and I.D.2 of this Section. [PCC 17.16.120.B]

C. Vehicles on Unpaved Surfaces

1. The Permittee shall not construct a new unpaved service road or unpaved haul road unless dust will be suppressed after construction by intermittently watering, limiting access, or applying chemical dust suppressants to the road, in such a way that visible dust emissions caused by vehicular traffic on the road do not violate PCC 17.16.050 (I.D.1.c, I.D.1.d and I.D.2 of this Section). The surfacing of roadways with asbestos tailings is prohibited. [PCC 17.16.090.D & F]

2. The Permittee shall effectively control dust emissions from the transportation of materials by covering stock loads in open-bodied trucks, limiting vehicular speeds, or other equivalently effective controls. [PCC 17.16.100.C]

D. General Non-Point Fugitive Standards

1. The Permittee is responsible for controlling windblown dust, dust from haul roads, and dust emitted from land clearing, earthmoving, demolition, trenching, blasting, road construction, mining, and other activities, as applicable. [PCC 17.16.060.A]

   a. Until the area becomes permanently stabilized by paving, landscaping or otherwise, dust emissions shall be controlled by applying adequate amounts of water, chemical stabilizer, or other effective dust suppressant. [PCC 17.16.060.A.1]

   b. The Permittee shall not leave land in such a state that fugitive dust emissions (including windblown dust or dust caused by vehicular traffic on the area) would violate PCC 17.16.050 (I.D.1.c, I.D.1.d and I.D.2 of this Section). [PCC 17.16.060.A.2]

   c. The Permittee shall not cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.050]

   d. The opacity of an emission from any non-point source, as measured in accordance with EPA Reference Method 9, shall not exceed 20 percent. [PCC 17.16.050.B.1]

2. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne

PROPOSED PERMIT

particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken. [PCC 17.16.050.D]

a. Sources required to obtain an air quality permit under ARS § 49-426, § 49-480 or Rule 17.12.470 may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with I.D.2 of this Section. [PCC 17.16.050.D.1]

b. I.D.1.c, I.D.1.d and I.D.2 of this Section shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source. [PCC 17.16.050.D.2]

c. I.D.1.c, I.D.1.d and I.D.2 of this Section shall not apply to the generation of airborne particulate matter from undisturbed land. [PCC 17.16.050.D.3]

3. The Permittee shall not cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.110.A]

4. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to minimize and control to ensure compliance with I.D.1.c, I.D.1.d and I.D.2 of this Section. [PCC 17.16.110.B]

## II. Monitoring Requirements [PCC 17.12.185.A.3]

A. Mineral Tailings

1. The Permittee shall follow all the monitoring provisions identified in the approved DSTMP.

2. The Permittee shall review the DSTMP annually for its effectiveness in controlling fugitive emissions. The review shall be submitted to the Control Officer by January 31 of each year (covering the period January 1st through December 31st of the previous year). If review of the plan shows ineffectiveness in controlling emissions, (more than two violations per year) the Permittee shall submit a revised Plan for approval by April 1 following the annual review. The revised DSTMP plan shall show improved methods/ techniques for reducing emissions in order to minimize or prevent further violations. The annual review shall take into account past compliance issues, resolved/ unresolved including validated complaints reported to PDEQ and propose how those issues can be avoided in the future. Recommendations or stricter requirements will be prescribed by PDEQ should Rosemont's annual review show that changes are required but not proposed by Rosemont.

B. General Non-Point Fugitive Emissions (including Mineral Tailings)

To demonstrate compliance with the emission limitations and standards in I.D.1.d and I.D.2 of this Section, the Permittee shall:

PROPOSED PERMIT

1. Conduct regular visible emissions checks on each process/unit in this Section. The checks shall be no less than twice daily at or near berm building locations with construction equipment in actual normal operating mode on the berm and no more than weekly at all other non berm building locations and times). The checks shall be conducted from strategic locations to be identified and submitted to the Control Officer. The locations shall be identified as an attachment titled Fugitive Lookout Points.

2. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at each process/unit source of this Section. The frequency of 'regular' emissions checks shall be dependent on the fugitive dust generating process or activity, the existing and forecasted meteorological conditions and the tailing dam surface characteristics. If excessive amounts of particulate matter are present and/or foreseeable (i.e. presence of wind speeds at or above 15 mph, or gusts at or above 20 mph or lack of dust suppressant material on the tailing dam surfaces or preparation of tailing dam surface for ground works), the Permittee shall increase the frequency of visible emissions checks and application of dust controls that are commensurate with the size and scope of the emission(s) to assure and demonstrate compliance with the emission limitations in I.D.1 and I.D.2. The results of these visible emissions checks shall be used to determine the need for additional dust control measures. Forecasting of wind speeds shall be achieved using the National Weather Service (NWS) Data.

4. The Permittee shall monitor wind speeds and wind direction by using the National Weather Service meteorological forecasts for Tucson AZ. The monitoring shall include a meteorological forecast each day for the following two days (i.e. On Monday the forecast for Tuesday and Wednesday would be monitored).

5. When wind speeds at or above 15 mph, or gusts at or above 20 mph are forecast, the Permittee shall physically inspect tailings for easily eroded areas, loose soils, weakened areas of the surface crust of the tailings dam, and or cracks in the crust. Results of the inspection(s) including but not limited to any control measures used or corrective actions taken shall be noted on a schematic of the tailings dam (need not be to scale) with approximate locations of physical points and other distinguishing features, such as dividers, etc.

6. If during any tailings inspection required by II.B.1 or 2 of this Section, the Permittee sees visible emissions that, on an instantaneous basis, appear to exceed 20% opacity, then the Permittee shall, if practicable, take six-minute Method 9 observation of the emission source. If the emissions are observed to be more than the opacity limitation and standards within this Section, then this occurrence shall be recorded and reported as an excess emission and permit deviation.

7. If the observer sees visible emissions from any process/unit sources identified in this Section, that, on an instantaneous basis, appear to exceed 20% opacity, then the Permittee shall, if practicable, take six-minute Method 9 observation of the emission source. If the emissions are more than the opacity limitation and standards within this Section, then this occurrence shall be recorded and reported as an excess emission and permit deviation.

8. When required the Permittee shall perform visible emission observations in accordance with EPA Method 9, Appendix A in 40 CFR 60, to demonstrate compliance with the visibility limiting standards. [PCC 17.16.040.A.1]

## III. Recordkeeping Requirement [PCC 17.12.185.A.4]

1. The Permittee shall record the results of the required monitoring as detailed in the approved DSTMP & FDMP.

PROPOSED PERMIT

2. When the forecast wind speeds are at or above 15 mph, or gusts are at or above 20 mph, the Permittee shall maintain a record of all meteorological forecasts for Tucson AZ, including tailing inspections and control measures used and corrective actions taken to demonstrate compliance with the emission limitations in I.D.1 and I.D.2 of this Section. [PCC 17.12.185.A.4

3. The Permittee shall record the date and time of all visible emission checks, the name of the person conducting the check, the results of the check and the type of corrective action taken (if required). All records shall be maintained for five years.

4. A copy of watering schedules, if developed and implemented to control the generation of airborne particulate matter shall be maintained at the facility on a per shift basis. All records shall be maintained for five years.

## IV. Reporting Requirements

The Permittee shall promptly report and submit reports of excess emissions and permit deviations as described in X.A of Part B.

## V. Testing Requirements

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a facility would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.20.010]

A. Opacity

When required, the Permittee shall perform EPA Method 9 visible emissions observations on the facility operations to demonstrate compliance with the opacity standard. [PCC 17.20.010]

B. Alternative Test Method

The Permittee may submit an alternate and equivalent test method(s) that is listed in 40 CFR Subpart 60, Appendix A, to the Control Officer in a test plan, for approval by the Control Officer. [PCC 17.12.045.D]

PROPOSED PERMIT

# Part B

## Section 6

## Solvent Extraction & Electrowinning (SX/EW)

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Emission Unit ID | Emission Point(s) |
|---|---|---|---|
| A | 4 SX Primary Mix Tanks | T-E1P, T-E1PP, T-E2P, T-S1P | Fugitive |
| | 4 SX Secondary Mix Tanks | T-E1S, T-E1PS, T-E2S, T-S1S | Fugitive |
| | 3 SX Tertiary Mix Tanks | T-E1T, T-E1PT, T-E2T | Fugitive |
| | 4 SX Settlers | ES-E1P. E1P, T-E2, SS-S1 | Fugitive |
| | 30 Electrowinning Commercial Cells | EWCC | Fugitive |
| B | 6 Cell Ventilation Wet Scrubbers & other Controls | PC-EWCVS1 to PC-EWCVS6 | Stack |

### I. Emission Limitations and Standards [PCC 17.12.185.A.2]

A. Emission Group A

1. The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [PCC 17.16.430.D]

2. Materials including solvents or other volatile compounds, paints, acids and alkalies utilized in the SX/EW process shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [PCC 17.16.430.F]

3. Where a stack, vent or other outlet is at such a level that fumes, gas, mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property [PCC 17.16.430.G]

B. Emission Group B **[Material Permit Conditions]**

1. The Permittee shall operate and maintain all equipment identified in Emission Group in accordance with manufacturer's specifications or operating practices which conform with good air pollution control practices. In addition, the six EW Cell Ventilation Scrubbers shall be operated at all times that any of the electrowinning commercial cells are operating.

PROPOSED PERMIT

2. The Permittee shall install, and at all times maintain and use covers on the mixer settler tanks to control emissions from the Solution Extraction Plant.

3. The Permittee shall use one or more of the following methods to control emissions from the Electrowinning Tankhouse:

   a. Foam

   b. Blankets

   c. Surfactants

   d. Brushes

   e. Thermal retention balls

   f. Water foggers

   g. Other effective means of controlling sulfuric acid emissions approved by the Control Officer.

## II. Monitoring, Reporting and Recordkeeping Requirements

1. The Permittee shall maintain a record of all control measures used to limit emissions from the SX/EW process. [PCC 17.12.185.A.4]

2. The Permittee shall promptly report and submit reports of excess emissions and permit deviations as described in X.A of Part B [PCC 17.12.185.A.5]

PROPOSED PERMIT

# Part B

## Section 7

## Combustion Processes

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Equipment ID | Unit ID | NSPS Engine Designation | Compliance Date for Federal Regulations* |
|---|---|---|---|---|---|
| A | Thickener Area Emergency Diesel Generator | TEG | FB02 | Emergency | Upon Start-up |
| | PLS Pond Area Emergency Diesel Generator | PEG | FB03 | Emergency | Upon Start-up |
| | Main Substation Emergency Diesel Generator | MEG | FB04 | Emergency | Upon Start-up |
| | Administration Building Emergency Diesel Generator | AEG | FB05 | Emergency | Upon Start-up |
| | Electrowinning Building Emergency Diesel Generator | EWEG | FB06 | Emergency | Upon Start-up |
| | Primary Crusher Fire Diesel Water Pump | PCFWP | FB07 | Emergency Water Pump | Upon Start-up |
| | SX/EW Fire Diesel Water Pump | SXFWP | FB08 | Emergency Water Pump | Upon Start-up |
| B | Electrowinning Diesel Hot Water Heater | HWG | FB01 | N/A | Upon Start-up |

### I. Operational, Emission Limitations and Standards [PCC 17.12.185.A.2]

A. Emission Group A **[Federally Enforceable Conditions]**

1. Certified Emission Limits (CI ICE) [40 CFR 60.4203, 40 CFR 60.4202(a) & 40 CFR 4205(b)]

The following standards apply to the emergency stationary compression ignition engines (CI ICE) that are not certified National Fire Protection Association (NFPA) fire pump engines.

a. New CI ICE in Emission Group A identified as emergency engines shall be certified by the manufacturer at or below the applicable emission standards and shall continue to meet them for the entire life of the engine.

b. Applicable emission standards and the useful life of the engine are identified below.

| Maximum Engine Power | Model Year | NMHC+ NOx (g/hphr) | CO (g/hphr) | PM (g/hphr) |
|---|---|---|---|---|
| HP ≥750 | ≥2007 | 4.8 | 2.6 | 0.15 |
| Useful life = 8,000 hours or 10 years, whichever comes first | | | | |

PROPOSED PERMIT

c. The Permittee must operate and maintain applicable units according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. [40 CFR 60.4206]

2. Certified Emission Limits (Fire Pump CI ICE)

The following standards apply to the stationary compression ignition engines that are certified as National Fire Protection Association (NFPA) fire pump engines.

a. New CI ICE in Emission Group A identified as emergency water pump engines must be certified by the manufacturer at or below the applicable emission standards and shall continue to meet them for the useful life of the engine. Applicable emission standards and the useful life of the engine are identified below. [40 CFR 60.4203, 4205(c), & Table 4 of Subpart IIII]

| Maximum Engine Power | Model Year | NMHC+ NOx (g/hphr) | CO (g/hphr) | PM (g/hphr) |
|---|---|---|---|---|
| HP ≥750 | ≥2007 | 3.0 | | 0.15 |
| Useful life = 8,000 hours or 10 years, whichever comes first | | | | |

b. The Permittee must operate and maintain applicable units according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. [40 CFR 60.4206]

3. Opacity Standards

a. Except for constant-speed engines, opacity shall not exceed: [40 CFR 60.4202(a)(1) & (a)(2), 40 CFR 89.113 & 40 CFR 1039.105]

i. 20 percent during the acceleration mode;

ii. 15 percent during the lugging mode; and

iii. 50 percent during the peaks in either the acceleration or lugging modes.

b. The Permittee shall not cause or permit the effluent from a single emission point or multiple emission point to have an average optical density equal to or greater than 20 percent. Cold diesel engines are exempt for the first 10 minutes. [PCC 17.16.040]

c. The Permittee shall not cause or permit the effluent from a single emission point, multiple emission point, or a fugitive emissions source to have an average optical density equal to or greater than 60 percent when a cold diesel engine is started or when a diesel engine is accelerated under load as measured in accordance with EPA Method 9. [PCC 17.16.040]

4. Fuel Requirements [40 CFR 60.4207]

**[Material Permit Condition]**

The Permittee must use diesel fuel that meets the following requirements on a per-gallon basis: [40 CFR 60.4207(a) & 80.510(a)]

a. Sulfur content: 15 parts per million (ppm) maximum;

b. Cetane index or aromatic content, as follows:

PROPOSED PERMIT

i. A minimum cetane index of 40; or

ii. A maximum aromatic content of 35 volume percent.

5. Emergency Designation [40 CFR 60.4211(e)]

Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The Permittee may petition the Control Officer for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Any operation other than emergency operation, and maintenance and testing as permitted in this Attachment, is prohibited.

6. Compliance [40 CFR 60.4211]

a. The Permittee must operate and maintain the applicable stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. In addition, the Permittee may only change those settings that are permitted by the manufacturer. [40 CFR 60.4211(a)]

b. The Permittee shall demonstrate compliance with the emission standards specified Emission Group A by purchasing an engine certified to those standards. The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4211(c)]

B. Emission Group B

1. Fuel Limitation

The Permittee shall combust only low sulfur diesel fuel in the Electrowinning Hot Water Generator (HWG). [PCC 17.16.165.G]

**[Material Permit Condition]**

2. Visibility Limiting Standards

a. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any fuel-burning operation, smoke, excluding water vapor, which exceeds 20 percent opacity. [PCC 17.16.040]

b. The Permittee shall not cause or permit the airborne diffusion of visible emissions, excluding water vapor, beyond the property boundary line without appropriately controlling the emissions at the point of discharge. [PCC 17.16.050.D]

## II. Monitoring Requirements [PCC 17.12.185.A.3]

A. Emission Group A [40 CFR 60.4209(a)]

**[Federally Enforceable Conditions]**

PROPOSED PERMIT

1. The Permittee shall install a non-resettable hour meter on each applicable stationary emergency CI ICE prior to startup of each engine. [PCC 17.12.185.A.3.d]

2. Opacity [40 CFR 89.113(b)]

   a. Opacity levels in I.A.2 of this Section are to be measured and calculated as set forth in 40 CFR part 86, subpart I. Notwithstanding the provisions of 40 CFR part 86, subpart I, two-cylinder nonroad engines may be tested using an exhaust muffler that is representative of exhaust mufflers used with the engines in use.

   b. The following engines are exempt from the requirements of III.B.1 of this Section [40 CFR 89.113 (c)(1) & (3)]

      i. Single-cylinder engines;

      ii. Constant-speed engines.

   c. The Permittee shall if practicable conduct a visible emissions check on the exhaust stack of each generator at least quarterly while the generator is operating. For the purposes of this permit, a visible emission check is verification that abnormal emissions are not present at the generator stack and a visible emission check is "practicable" if the unit was run for testing or maintenance purposes during the quarter. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required). All records shall be maintained for five years.

B. Emission Group B

In order to demonstrate compliance with the visibility limitation standard in I.B.2 of this Section, the Permittee shall observe the exhaust stacks of the HWG at least once during each quarter if practicable when firing diesel fuel for evidence of visible emissions. A visible emission check is "practicable if the unit was run for testing or maintenance purposes during the quarter The Permittee shall record the results of each of these in a log containing the date of the check, the person making the check, the specific stack observed, and whether visible emissions were observed. If the visible emissions observed were greater than the standard in I.B.2 of this Section, the Permittee shall include in the log entry any corrective action taken and report to the Control Officer according the requirements in Part A of this permit. [PCC 17.12.185.A.4 & 5]

## III. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Emission Group A **[Federally Enforceable Conditions]**

1. Hourly Operational Records [40 CFR 60.4214(b)]

If the engine(s) does not meet the standards for a non-emergency unit for the same model year and maximum horsepower, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall also record the time of operation of the engine and the reason the engine was in operation during that time. All records shall be maintained for five years

2. Diesel Fuel Recordkeeping

PROPOSED PERMIT

The Permittee shall maintain records that verify compliance with the diesel fuel requirements in I.A.3 of this Section.

3. Opacity

The Permittee shall keep all records generated to show compliance with the opacity level measurement requirements of II.A.2 of this Section.

B. Emission Group B

1. In order to demonstrate compliance with the fuel limitation standard in I.B.1 of this Section, the Permittee shall maintain records of the fuel supplier specifications or bill of laden sheets which verify the sulfur content of the fuel, piped and/or delivered. The record shall show: [PCC 17.16.010.C]

a. The dates on which diesel fuel was purchased and/ or delivered;

b. The maximum sulfur content in percent by weight for each load of diesel fuel purchased as certified by the supplier using Test Method ASTM D 2880-71 or an equivalent to determine the sulfur content of liquid fuels;

c. The basis for the determination of the sulfur content of the diesel fuel.

e. The amount of diesel fuel combusted in gallons.

## IV. Testing Requirements [40 CFR 60.4212 & PCC 17.12.185.A.3.a]

Should the Permittee elect to or be required to conduct performance testing to demonstrate compliance with the applicable standards of this Attachment, the Permittee shall do so in accordance with 40 CFR 60.4212.

## V. Additional Requirements [40 CFR 60.4218 & 60.4214(b)]

The General Provisions of 40 CFR 60.1 though 19 apply to applicable sources as indicated in Table 8 of 40 CFR Subpart IIII except that the Permittee is not required to submit an initial notification.

## VII Facility Recordkeeping [PCC 17.12.185.A.4]

All records required by, or generated to verify compliance with this attachment shall be maintained for five years.

PROPOSED PERMIT

# Part B

## Section 8

## Miscellaneous Sources

The conditions in this Section apply to the processes and units in the Emission Groups identified in the table below.

| Emission Group | Process/Unit Description | Equipment ID | Emission Point ID | NSPS |
|---|---|---|---|---|
| A | Bulk Pebble Lime Silo | S-BPL | MS01 | No |
| | Bulk Pebble Lime Silo Screw Conveyor | CV-BPLS | MS02 | No |
| | Bulk Pebble Lime Silo Vent | PC-BPLBV | | |
| | Lime Storage Bin | B-L | MS04 | No |
| | Lime Storage Bin Vent | PC-LSBV | | |
| | Sodium Metasilicate Storage Bin | B-SM | MS05 | No |
| | Sodium Metasilicate Storage Bin Vent | PC-SMSBV | | |
| | Flocculant Storage Bin | B-F1/F2 | MS06 | No |
| | Guar Feeder | F-Gu | MS07 | No |
| | Cobalt Sulfate Feeder | F-CoS | MS08 | No |
| B | Laboratory Dust Collector 1 | PC-L1 | PCL09 | No |
| | Laboratory Dust Collector 2 | PC-L2 | PCL10 | No |
| | Laboratory Dust Collector 3 | PC-L3 | PCL11 | No |
| | Laboratory Wet Scrubber | PC-LWS | | No |

### I. Emission Limitations and Standards [PCC 17.12.185.A.2]

A. Emission Group A

1. The Permittee shall not cause or permit the emission of particulate matter discharged into the atmosphere at rates greater than the following: [PCC 17.16.430.A]

   a. For process sources having a process weight rate of sixty thousand pounds per hour (thirty tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

where:

PROPOSED PERMIT

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight in tons-mass per hour.

b. For process weight rate greater than sixty thousand pounds per hour (thirty tons per hour), the maximum allowable emissions shall be determined by the following equation:

$E = 17.31P^{0.16}$

where "E" and "P" are defined as indicated in I.A.1.a of this Section.

c. For purposes of I.A.1.a & b of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [PCC 17.16.430.B]

d. The actual values shall be calculated from the applicable equations and rounded off to two decimal places. [PCC 17.16.430.C]

2. Where a stack, vent or other outlet is at such a level that fumes, gas, mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the control officer may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [PCC 17.16.430.G]

3. The Permittee shall not cause, or permit the opacity of an emission from any non-point source as measured in accordance with the Arizona Testing Manual, Reference Method 9, to exceed 20 percent. [PCC 17.16.050.B]

4. Material Handling

The Permittee shall not cause, suffer, allow or permit handling, transporting or conveying of materials or other operations in Emission Group A likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.100.A]

5. Lime Storage

a. No person shall cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.050.A]

b. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. The Permittee may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken. [PCC 17.16.050.D]

i. The Permittee may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with this provision. [PCC 17.16.050.D.1]

PROPOSED PERMIT

ii. This subsection (I.C.3.b) shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source. [PCC 17.16.050.D.2]

B. Emission Group B

1. The Permittee shall not cause to be discharged into the atmosphere any stack emissions from the Laboratory Dust Collectors (PC-L1 to PC-L3) particulate matter in excess of 0.005 grains/dscf. [PCC 17.12.190.B]
**[Federally Enforceable Condition]**

2. The Permittee shall operate Emission Group B in accordance with good air pollution control practices when the associated process equipment is operating. [PCC 17.12.190]

3. The Permittee shall not cause, allow or permit the effluent from the wet scrubber and dust collector stacks to have an average optical density equal to or greater than 20 percent opacity. [PCC 17.16.040]

## II. Monitoring Requirements [PCC 17.12.185.A.3.c]

A. The Permittee shall demonstrate compliance with the opacity limitations in I.A.3 & I.B.3 of this Section by monitoring the fugitive and process fugitive emissions from Emission Group A biweekly (every two weeks).

B. If during the visual survey required in II.A of this Section, the Permittee sees emissions that, on an instantaneous basis, appear to exceed 20 percent opacity, then the Permittee shall take a six-minute Method 9 observation of the emissions. If the emissions are 20 percent opacity or more this shall be recorded and reported as an excess emission and permit deviation.

C. If during the visual survey required in II.A of this Section, the Permittee does not see any emissions from Emission Group A that, on an instantaneous basis, appear to exceed 20 percent opacity, then the Permittee shall keep a record of the name of the observer, the date on which the visual survey was made, the location, and the results of the visual survey.

D. If the six-minute opacity of the emissions observed during the survey required in II.A of this Section is less than 20 percent, then the observer shall make a record of the following:

a. Location, date, and time of the observation; and

b. The results of the Method 9 observation.

E. If the six-minute opacity of the plume observed during the survey required in II.A of this Section exceeds 20 percent then the Permittee shall investigate the cause of the exceedance and if necessary modify the operating and maintenance procedures of the process to reduce the opacity to below the opacity standard. The Permittee shall record the results and conclusions of this investigation.

PROPOSED PERMIT

## III. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. All Emission Groups

Follow recordkeeping described in the Monitoring Requirements for Emission Group A in II.B. – E of this Section.

## IV. Reporting Requirements [PCC 17.12.185.A.4]

The Permittee shall promptly report and submit reports of excess emissions and permit deviations as described in X.A of Part A.

## V. Testing Requirements

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a facility would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.20.010]

A. The Permittee shall conduct the initial and subsequent performance tests of the laboratory pollution control devices and submit to the Control Officer a written report of the results of the test as specified in Pima County Code and the Arizona Testing Manual. The initial performance test shall be conducted no later than 180 days of beginning mine operations. [PCC 17.12.010]
**[Federally Enforceable Condition]**

B. In order to show compliance with I.B.1 of this Section, the Permittee shall conduct a particulate matter performance test on the Scrubbers at least once per five-year permit term. [PCC 17.20.010]
**[Federally Enforceable Condition]**

C. Opacity

When required, the Permittee shall perform EPA Method 9 visible emissions observations on the facility operations to demonstrate compliance with the opacity standard. [PCC 17.20.010]

PROPOSED PERMIT

# Part B

## Section 9

## Storage Tanks

The conditions in this Section apply to the storage tanks identified below.

| Tank Description | Product Stored | Unit ID | Emission Unit ID | Maximum Capacity |
|---|---|---|---|---|
| Collector Distribution | Sodium Akylmonothiophosphate | T-C7D | T01 | |
| Product Storage | Methyl isobutyl Carbinol | T-MIBCS | T02 | |
| Fuel Storage | Diesel | T-DFS-HV1<br>T-DFS-HV2 | T03<br>T04 | 100,000 gallons |

### I. Operational, Emission Limitations and Standards [PCC 17.12.185.A.2]

A. The Permittee shall not emit gaseous or odorous materials from the diesel storage tanks in such quantities or concentrations as to cause air pollution. [PCC 17.16.430.D]

B. Materials including solvents or other volatile compounds, paints, acids, alkalis, pesticides, fertilizers and manure shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [PCC 17.16.430.F]

C. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the Permittee to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [PCC 17.16.430.G]

D. The Permittee shall only store products in the respective tanks that are similar or lower in vapor pressure.

### II. Recordkeeping

A. The Permittee shall keep a record of the tank ID and product stored. If the tank's product is replaced with one not similar or lower in vapor pressure, the Permittee shall notify the Control Officer and submit a permit revision and recalculate emissions if necessary.

PROPOSED PERMIT

# Part B

## Section 9

## Mobile Sources

The requirements of this Section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in PCC 17.04.340.

### I. Emission Limitations/ Standards

A. Off Road Machinery

1. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any off-road machinery **(mobile source)**, visible emissions for any period greater than ten consecutive seconds, the opacity of which exceeds forty percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.16.450.A]

2. Off-road machinery shall include trucks, graders, scrapers, rollers, locomotives and other construction and mining machinery not normally driven on a completed public roadway. [PCC 17.16.450.B]

B. Roadway and Site Cleaning Machinery

1. The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.16.470.A]

2. In addition to complying with I.B.1, the Permittee shall not cause, allow or permit the cleaning of any site, roadway or alley without taking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions may include applying dust suppressants. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means. [PCC 17.16.470.B]

PROPOSED PERMIT

# Attachment 1

## Applicable Regulations

Requirements Specifically Identified as Applicable:

**Code of Federal Regulations Title 40:**

| | |
|---|---|
| Part 60 Subpart LL | New Source Performance Standards (NSPS) for Metallic Mineral Processing Plants |
| Part 60 Subpart IIII | New Source Performance Standards (NSPS) for Stationary Internal Combustion engines |

**Pima County Code (PCC) Title 17, Chapter 17.16:**

| | |
|---|---|
| 17.16.010 | Local Rules and Standards – Applicability of More than One Standard |
| 17.16.020 | Noncompliance with Applicable Standards |
| 17.16.040 | Visible Emission Standards: Standards and applicability (Include NESHAP) |
| 17.16.050 | Visibility Limiting Standards |
| 17.16.060 | Fugitive Dust Producing Activities |
| 17.16.090 | Roads and Streets |
| 17.16.100 | Particulate Materials |
| 17.16.110 | Storage Piles |
| 17.16.120 | Mineral Tailings |
| 17.16.165 | Standards of Performance for Fossil-Fuel Fired Industrial and Commercial Equipment |
| 17.16.360 | Standards of Performance for Nonferrous Metals Industry Sources |
| 17.16.450 | Off-Road Machinery |
| 17.16.470 | Roadway and Site Cleaning Machinery |
| 17.16.490 | Standards of Performance for New Stationary Sources |

PROPOSED PERMIT

## Attachment 2

## Equipment List

| Table 1 – Primary Crushing | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Description/ Type** | **Make** | **Model** | **Serial Number** | **Date of Manufacture** | **Maximum Size OR Capacity** | **NSPS Applicable** |
| Primary Crusher (PCr) | PC03 | Gyratory, water sprays | Sandvik | TBD | TBD | TBD | 6950 TPH | Y |
| Crusher Dump Hopper (H-CDp) | PC02 | | N/A | N/A | N/A | TBD | 680 tons | Y |
| Crusher Discharge Hopper (H-CDs) | PC04 | Enclosed | N/A | N/A | N/A | TBD | 725 tons | Y |
| Crusher Discharge Feeder (F-CD) | PC05 | 25'L x 96"W | N/A | N/A | N/A | TBD | TBD | Y |
| Stockpile Feed Conveyor (CV-SF) | PC06 | 2690'L x 60"W | N/A | N/A | N/A | TBD | TBD | Y |
| Crushing Area Scrubber (PC-CAS) | PCL01 | Wet Scrubber | Ducon Technologies | | TBD | TBD | 78, 18,000 acfm | Y |
| Stockpile Tripper Conveyor (CV-ST) | PC07 | 343'L x 60"W (Underground) | N/A | N/A | N/A | TBD | TBD | N |
| Stockpile Area Scrubber (PC-SAS) | PCL02 | Wet | Ducon Technologies | | TBD | TBD | 108, 36,500 acfm | Y |
| Reclaim Feeders (F-R1/R4) | PC10 | 20'L x 48"W (Underground) | N/A | N/A | N/A | TBD | 4 @ | N |
| Reclaim Conveyor (CV-R) | PC11 | 932'L x 60"W | N/A | N/A | N/A | TBD | TBD | Y |
| Reclaim Tunnel Scrubber (PC-RTS) | PCL03 | Wet | Ducon Technologies | | TBD | TBD | 72, 15,000 acfm | Y |
| SAG Mill Feed Conveyor (CV-SMF) | PC12 | 660'L x 60"W | N/A | N/A | N/A | TBD | TBD | Y |

PROPOSED PERMIT

**Table 2 – Pebble Crushing**

| Name (Equipment ID) | Emission Point ID | Description/ Type | Make | Model | Serial Number | Date of Manufacture | Maximum Size OR Capacity | NSPS Applicable |
|---|---|---|---|---|---|---|---|---|
| Pebble Crusher (PbC) | M10, M11 | TBD | TBD | TBD | TBD | TBD | 1771 TPH | Y |
| Pebble Crusher Area Scrubber (PC-PCAS) | PCL04 | TBD | Ducon Technologies | | TBD | TBD | 84, 22,000 acfm | Y |
| Pebble Crusher Feeder (F-PbC) | M09 | 31.5' L x 48 W | | N/A | N/A | TBD | TBD | Y |
| Pebble Conveyor No. 3 (CV-Pb3) | M12 | 170.5' x 36 W | N/A | N/A | N/A | TBD | TBD | Y |
| SAG Mill (M-SAG) | M01 | 36' D x 17.5' EGL Wet Process | | N/A | | TBD | TBD | Y |
| Trommel Screen (Sn-T) | M02, M03 | 16'L x 16'W Wet Process | N/A | N/A | N/A | TBD | TBD | Y |
| Pebble Conveyor No. 1 (CV-Pb1) | M04 | 135.5'L x 60"W Clean, Wet Ore | N/A | N/A | N/A | TBD | TBD | Y |
| Pebble Wash Screen (Sn-PbW) | M05, M06 | lO'L x 20'W Wet Process | N/A | N/A | N/A | TBD | TBD | Y |
| Pebble Conveyor No. 2 (CV-Pb2) | M07 | 675' L x 36"W Clean, Wet Ore | N/A | N/A | N/A | TBD | TBD | Y |
| SAG Oversize Surge Bin (B-SAGOS) | M08 | TBD | TBD | N/A | TBD | TBD | 500 tons | Y |
| Ball Mills | | 25' D x 40' EGL Wet Process | TBD | N/A | TBD | TBD | TBD | Y |

PROPOSED PERMIT

| Table 3 – Copper Concentrate Dewatering | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Description/ Type** | **Make** | **Model** | **Serial Number** | **Date of Manufacture** | **Maximum Size OR Capacity** | **NSPS Applicable** |
| Filter Feed Trash Screen (Sn-FFT) | N/A | 60" L x 48" W (Wet Process) | N/A | N/A | N/A | TBD | TBD | Y |
| Copper Concentrate Filters (Ft-CC1/ CC4) | N/A | | N/A | N/A | N/A | TBD | TBD | Y |
| Copper Concentrate Conveyor (CV-CC) | CCD01 | 330'L x 24"W (Enclosed Process) | N/A | N/A | N/A | TBD | TBD | Y |
| Copper Concentrate Scrubbers (PC-CCS1/ CCS2) | PCL05/ PCL06 | Wet Scrubbers | Ducon Technologies | | TBD | TBD | 126, 2 @ 50,000 acfm | Y |

PROPOSED PERMIT

| Table 4 – Molybdenum Concentrate Dewatering | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Description/ Type** | **Make** | **Model** | **Serial Number** | **Date of Manufacture** | **Maximum Size OR Capacity** | **NSPS Applicable** |
| Molybdenum Concentrate Dryer (D-MC) | MD01, MD02 | TBD | N/A | N/A | N/A | TBD | TBD | Y |
| Molybdenum Scrubber (PC-MS) | PCL07 | Venturi Scrubber | Bionomic Industries | N/A | N/A | TBD | TBD | Y |
| Electrostatic Precipitator (PC-EP) | PCL07 | Wet ESP | Bionomic Industries | TBD | TBD | TBD | 139 acfm | Y |
| Molybdenum Concentrate Bin (B-MC) | MD03 | TBD | N/A | N/A | N/A | TBD | 20 tons | Y |
| Molybdenum Dust Collector (PC-MDC) | PCL08 | Baghouse | Ducon Technologies | | TBD | TBD | 20/314, 1500 acfm | Y |
| Molybdenum Concentrate Hopper (H-MC) | MD04 | TBD | N/A | N/A | N/A | TBD | 20 $ft^3$ | Y |
| Molybdenum Concentrate Conveyor (CV-MC) | MD05 | TBD | N/A | N/A | N/A | TBD | 90 TPH | Y |
| Molybdenum Packaging and Weigh System (MPS) | MD06 | TBD | N/A | N/A | N/A | TBD | Variable | Y |

PROPOSED PERMIT

| Table 5 – Solvent Extraction & Electrowinning | | | |
|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Maximum Size OR Capacity** | **NSPS Applicable** |
| 4 SX Primary Mix Tanks (T-E1P, E1PP, E2P, S1P) | SXE01 | 7.75' D x 9.75' H | N |
| 4 SX Secondary Mix Tanks (T-E1S, E1PS, E2S, S1S) | SXE01 | 9.5' D x 9.75' H | N |
| 4 SX Tertiary Mix Tanks (T-E1T, E1PT, E2T) | SXE01 | 9.5' D x 9.75' H | N |
| 4 SX Settlers (ES-E1. E1P, E2, SS-S1) | SXE01 | 64’L x 33’W x 3.33’H | N |
| Electrowinning Commercial Cells (EWCC) | SXE02 | 22’L x 4’W x 5’ | N |

PROPOSED PERMIT

| Table 6 – Combustion Processes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Description/ Type** | **Make** | **Model** | **Serial Number** | **Date of Manufacture** | **Maximum Size OR Capacity** | **NSPS Applicable** |
| Thickener Area Diesel Generator (TEG) | FB02 | Emergency | TBD | TBD | TBD | TBD | 1,000 kW | Y |
| PLS Pond Area Diesel Generator (PEG) | FB03 | Emergency | TBD | TBD | TBD | TBD | 1,000 kW | Y |
| Main Substation Diesel Generator (MEG) | FB04 | Emergency | TBD | TBD | TBD | TBD | 750 kW | Y |
| Administration Building Diesel Generator (AEG) | FB05 | Emergency | TBD | TBD | TBD | TBD | 750 kW | Y |
| Electrowinning Building Diesel Generator (EWEG) | FB06 | Emergency | TBD | TBD | TBD | TBD | 50 kW | Y |
| Primary Crusher Fire Diesel Water Pump (PCFWP) | FB07 | Emergency | TBD | TBD | TBD | TBD | 400 HP | Y |
| SX/EW Fire Diesel Water Pump (SX/EW) | SXFWP | Emergency | TBD | TBD | TBD | TBD | 400 HP | Y |
| Electrowinning Diesel Hot Water Heater (HWG) | HWG | Hot Water Heater | TBD | TBD | TBD | TBD | 6.0 MMBtu/hr | No Subject to NESHAP |

PROPOSED PERMIT

| Table 7 – Miscellaneous Sources | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Description/ Type** | **Make/ Model** | **Serial Number** | **Date of Manufacture** | **Maximum Size OR Capacity** | **NSPS** |
| Bulk Pebble Lime Silo (S-BPL) | MS01 | Storage | TBD | TBD | TBD | | N |
| Bulk Pebble Lime Silo Screw Conveyor (CV-BPLS) | MS02 | Conveyor | TBD | TBD | TBD | | N |
| Bulk Pebble Lime Silo Vent (PC-BPLBV) | | Pollution Control Device | TBD | TBD | TBD | 750/ 1,750 acfm | N |
| Lime Storage Bin (B-L) | MS04 | Storage | TBD | TBD | TBD | | N |
| Lime Storage Bin Vent (PC-LSBV) | | Pollution Control Device | | | | 750/ 1,750 acfm | |
| Sodium Metasilicate Storage Bin (B-SM) | MS05 | Storage | TBD | TBD | TBD | | N |
| Sodium Metasilicate Storage Bin Vent (PC-SMSBV) | | Pollution Control Device | | | | 750/ 1,750 acfm | |
| 2 Flocculant Storage Bins (B-F1 & F2) | MS06 | Storage | TBD | TBD | TBD | | N |
| Guar Feeder (F-Gu) | MS07 | Conveyor | TBD | TBD | TBD | | N |
| Cobalt Sulfate Feeder (F-CoS) | MS008 | Conveyor | TBD | TBD | TBD | | N |
| Laboratory Dust Collector 1 (PC-L1) | PCL09 | Pollution Control Device | TBD | TBD | TBD | 10,000 acfm | N |
| Laboratory Dust Collector 2 (PC-L2) | PCL10 | Pollution Control Device | TBD | TBD | TBD | 10,000 acfm | N |
| Laboratory Dust Collector 3 (PC-L3) | PCL11 | Pollution Control Device | TBD | TBD | TBD | 10,000 acfm | N |
| Laboratory Wet Scrubber (PC-LWS) | | Pollution Control Device | TBD | TBD | TBD | 9,000 acfm | N |

PROPOSED PERMIT

| Table 8 – Storage Tanks | | | | | |
|---|---|---|---|---|---|
| **Name (Equipment ID)** | **Emission Point ID** | **Description/ Type** | **Date of Manufacture** | **Maximum Capacity** | **NSPS Applicable** |
| Diesel Fuel Tank | T03, T04 | Storage | TBD | 100, 000 gallons | No |

PROPOSED PERMIT

## Attachment 3

## Insignificant Equipment/ List

1. Gasoline Storage tanks with a capacity of ten thousand gallons or less

    a. 10,000 gallon gasoline storage tank (Equipment ID # TBD)
    b. Storage tanks with a capacity of 10,000 gallons or less and with a maximum true vapor pressure less than or equal to the maximum true vapor pressure of gasoline at the same storage conditions.

        i. 1,692 gallon 50150 Mix Tank

2. Diesel and fuel oil storage tanks with capacity of forty thousand gallons or less.

    a. 11,000 gallon Diesel Fuel Storage Tank - EW Hot Water Generator
    b. 1 1,845 gallon Diesel Fuel Storage Tank - Concentrate Ore Processing
    c. 1,000 gallon Diesel Fuel Storage Tank - Motivator
    d. 10,000 gallon Diesel Fuel Storage Tank - Light Vehicles

3. Storage tanks with a capacity of 40,000 gallons or less and with a maximum true vapor pressure less than or equal to the maximum true vapor pressure of diesel at the same storage conditions.

    a. 5,000 gallon Flocculant Mix Tanks
    b. 5,000 gallon Flocculant Distribution Tanks
    c. 3,000 gallon Promoter Storage Tank
    d. 500 gallon Guar Mix Tank
    e. 500 gallon Guar Day Tank
    f. 9,500 gallon Diluent Storage Tank
    g. 165 gallon Decant Tank
    h. 3,000 gallon Automatic Transmission Fluid Storage Tank
    i. 5,876 gallon Engine Oil Storage Tank
    j. 3,000 gallon Hydraulic Fluid Storage Tank
    k. 3,000 gallon Gear Oil Storage Tank
    l. 5,876 gallon Used Oil Storage Tank
    m. 275 gallon Automatic Transmission Fluid Day Tank
    n. 275 gallon Engine Oil Day Tank
    o. 275 gallon Hydraulic Fluid Day Tank
    p. 275 gallon Gear Oil Day Tank
    q. 275 gallon Used Oil Day Tank

4. Constant level process tanks where emissions generated would be less than emissions generated from an equivalent size diesel fuel storage tank being refilled multiple times per year.

    a. 1,650 gallon Organic Separation Tank
    b. 840 gallon Recovered Organic Tank
    c. 67,600 gallon Loaded Organic Tank
    d. 90,000 gallon Crud Holding Tank
    e. 10,000 gallon Crud Decant Tank
    f. 5,000 gallon Crud Filtrate Tank

5. Batch mixers with rated capacity of five cubic feet or less.

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6. Wet sand and gravel production facilities that obtain material from subterranean and subaqueous beds, whose production rate is two hundred tonslhour or less, and whose permanent in-plant roads are paved and cleaned to control dust. This does not include activities in emissions units which are used to crush or grind any nonmetallic minerals.

7. Hand-held or manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning of ceramic art work, precision parts, leather, metals, plastics, fiberboard, masonry, carbon, glass or wood.

8. Powder coating operations.

9. Lab equipment used exclusively for chemical and physical analyses.

    a. Analytical and experimental laboratory equipment which is bench scale in nature, including quality control/quality assurance laboratories that are used as part of mineral evaluations, and research and development laboratories.

        i. Equipment used in the analytical laboratory.

10 Small pilot scale research and development projects, which include, but are not limited to the following:

    a. The testing of water mist spray controls for dust abatement.
    b. The testing of roadway surface treatment coating for dust abatement.
    c. Research involving alternate product forms.
    d. Geologic and hydrogeologic exploration and drilling activities.

11. Lab equipment used for chemical and physical analysis.

    a. Equipment used in the analytical laboratory.

12. Routine calibration and maintenance of laboratory equipment or other analytical instruments.

13. Equipment used for quality control assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

14. Hydraulic and hydrostatic testing equipment.

15. Environmental chambers not using hazardous air pollutant gasses

16. Trivial activities that meet the definition of trivial activities in Pima County Code excluding those activities that are subject to any federal regulations or have an applicable requirement in Pima County Code unless those activities have been exempted from the requirement to obtain a permit.

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